INDIA AS KNOWN TO VARAHAMIHIRA

A thesis submitted to the Panjab University Chandigarh for the award of Degree of Doctor of Philosophy (Faculty of Arts) 1968.

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PREFACE

This work presents a comprehensive study of the life and development of the people as revealed in the various works of Varahamihira in the background of available contemporary works and other archaeological sources.

In expressing my thanks to all those who have helped me in the making of this work, I must record my indebtedness to my supervisor Professor Buddha Prakash, M.A., Ph.D., D. Litt., Director, Indic Studies, Kurukshetra University, under whose scholarly and inspiring guidance this work has been completed.

I must also express my gratitude to Dr. B.Ch. Chhabra, Professor and Head of the Department of Ancient Indian Culture and Archaeology, Panjab University, Chandigarh; Professor Jagan Nath Agarwala, V.V.R.I., Hoshiarpur and my colleague, Dr. G.C. Mahapatra, for their much valuable suggestions.

August, 1968
Chandigarh

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INTRODUCTION

This work aims at the examination of the social, geographical and architectural and iconographical data in the works of the celebrated astronomer Varahamihira.

It is well known that Varahamihira was an encyclopaedic scholar and prodigious writer whose works are precious mines of information on the culture of the people in the sixth century A.D. Unfortunately, many of his works are now lost and their names only are known from later works and commentaries; but the works that have survived are voluminous as well as exhaustive and shed a flood of light on his times. The Brhat Samhita, Brhajjataka, Panca Siddhantika, Brhad Yoga Yatra, Yoga Yatra, Laghu Jataka, Brhad Vivaha Patala, Vivaha Patala, Tikanikayatra, Samasa Samhita, Vata Kanika, Horapancahotrya, Daivajna Vallabha, Brhajyotisa, Srngara Tarangini, Jatakarnava, Prasna Cudamani, Panca Paksi, Prasna Mahodadhi, Prasna Candrika, Mayura Citraka, Anga Cudamani, Yogarnava, Jyotisarnava, Dasa Cintamani, Sutikadhyaya, Jatakabharana, Puskaranyadi Paddhati and Tadaga Paddhati, have come down to us. Of them the Brhat Samhita, Brhajjataka and Laghu Jataka have also commentaries by eminent scholars like Utpala, Govinda Somayaji, Rudravarman, Nilotpala, Nitya Prakasa Suri, Mahidhara and in recent times A.N.S. Aiyangar.

Of these works the Brhat Samhita, Brhajjataka, Laghu Jataka, Panca Siddhantika, Yoga Yatra, Tikanikayatra, and Daivajna Vallabha are available in print and Brhad Yoga Yatra, Vatakanika, Brhajyotisa, Srngara Tarangini, Jatakarnava Prasna Cudamani, Panca Paksi, Prasna Mahodadhi, Prasna Candrika, Mayura Citraka, Anga Cudamani, Yogarnava, Jyotisarnava, Dasa Cintamani, Sutikadhyaya, Jatakabharana, Puskaranyadi Paddhati, Tadaga Paddhati exist in manuscript form. In the present thesis all these works printed as well as in manuscript form have been fully tapped and utilised.

Sir William Jones was the first scholar to be attracted by the works of Varahamihira. He dwelt on the scientific aspect of his works. Colebrooke, Brennand, Thibaut, Bhau Daji etc., also concentrated on the contribution of Varahamihira to the science of Astronomy. But the emphasis of these scholars was mainly on the Panca Siddhantika.

A new era dawned on the studies of Varahamihira with the editing and translation of his Brhat Samhita by H. Kern. This text being a veritable encyclopaedia of the knowledge of those times soon attracted the notice of the historians of art and culture. Fleet wrote an interesting article on the geographical data of his work. P.K. Acharya, Stella Kramrisch and Gopinath Rao utilised the information on architectural and iconographical knowledge contained in it. Stenzler, H.D. Velankar dwelt upon the data on prosody and

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metrics available in it. Keith and Macdonell assessed the importance of it in the range of Sanskrit literature.

In recent years Varahamihira's works have been approached from the socio-economic points of view also. S.B. Chaudhury, in the Ethnic Settlements in Ancient India, S.K. Maity in his Economic Life of Northern India in the Gupta Period and A.M. Shastri in an unpublished thesis on Varahamihira, has also made use of the materials available in this book. The last mentioned work of A.M. Shastri, is confined to the Brhat Samhita. Thus the need to make a synthetic and comprehensive study of all the available works of Varahamihira in a socio-cultural perspective remained to be undertaken. The present work is intended to fill that gap and widen the scope of Varahamihira's studies embracing all his works.

A writer is always in a way an interpreter of his age. In particular a scholar dealing with material facts of life like Varahamihira mirrors the conditions prevailing at his times quite faithfully. As the works of Varahamihira are concerned with the problems and questions of workaday world, he has amassed a vast volume of data of mundane life in material conditions. His works are replete with information regarding the type of life the people led in his age. Hence obviously they are of very great value for the historian of society and culture.

Varahamihira was not as much an innovator as a transmitter. He did not invent but only interpreted. His

main contribution is not the discovery of new facts or exposition of a new theory but the preservation, arrangement and ordering the mass of knowledge available at his times. Therefore, we can treat him as an encyclopaedist bringing the scientific knowledge of his times within compass. From this point of view also his works though not original and creative as those of Aryabatta, are most precious and significant for the historians of culture.

In the present work an attempt is made for the first time to bring into bold relief the structure of society and the system of culture with all its fads and foibles, beliefs and superstitions and objectives and attainments. While collecting the data from all his works and classifying and grouping them under various heads, all research work of scholars on the respective subjects upto date has been fully pressed into service. In this way the approach is classificatory and analytical as well as comparative and interpretative.

As the following pages will reveal the data furnished by Varahamihira add life and colour to many obscure objects of the socio-cultural history of India of the sixth century A.D. Many dark aspects have brightened up and many skeletons have throbbed up with new life. The society of Varahamihira was characterised by the rigid structure of caste which determined all aspects of life. Even diet and other forms of behaviour followed caste complexes. Yet the society was opened for the admittance of foreigners and thereby gave evidence of its resilience and adaptability. Varahamihira

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gives prominence to the socalled fifth Varna which was in process of assimilation into the orthodox pattern. Varahamihira also seems to be a champion of the cause of women and contrary to the most of the writers, gives a fairly high status to them. He is also against child marriage, liberal in the matter of divorce though curiously he acknowledges the prevalence of Sati.

As said above, Varahamihira's society was full of superstitions. People consulted the omens and the stars at every step. Some of these beliefs are of great sociological interest as has been shown in this work.

Inspite of the prevalence of the superstitions scientific progress was continuing. Varahamihira reveals a developing economy in which industry, trade and agriculture made striding advance. To counteract the incidents of famines artificial irrigation and reclamation of forests were stepped up; new techniques of grafting and manuring were experimented upon & new fruit plants and crops were introduced. The industry of metal, jewellery, upholstry, cosmetics, textiles repeatedly advanced and gave a tremendous impetus to trade making the people adventurous and broad-visioned. Varahamihira wrote a lot about touring and travelling and devoted many of his works to the beliefs and practices of the people who used to leave their houses for different distances very frequently. This also widened the geographical horizons with the result that the various places

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in the country as well as abroad especially Central Asia and South East Asia are prominently mentioned in the treatise on geography. Industry, trade and travel were meticulously organised into guilds, corporations and associations on which we get new and welcome light.

Economical advance brought material prosperity and cultural enrichment. This is manifest in the development of art, architecture and sculpture to which Varahamihira devotes considerable attention. His sections on architecture and iconography are full of detailed description of proportionate measurements and techniques. His classification of temples into twenty types and icons into numerous categories reveal not only his mastery over these subjects but also the progress of his age. Likewise his treatment of music, dance and drama is quite exhaustive and informative.

In the present work all these aspects of life and culture have been fully elucidated with copious references from the original works of Varahamihira. The result is a picture of singular charm, colour and fulness which at once attracts and enthrals.

In course of the study the question of date of Varahamihira has also been tackled and it has been shown that he lived from A.D. 504 to A.D. 582. Side by side what little can be gathered about his life has been penned to form a coherent narrative. In addition to this a brief history of the development of astronomy in ancient India has been traced and it has been shown that the Rasi system

(Zodiac) came to India from the Middle East particularly Babylonia through the Persians with whom the Maga or Magi had been assimilated. These Persianised Magas popularised sun-worship, astronomy, divination and the science of dreams and omens in Iran, Central Asia and India. Varahamihira was a notable representative of these people as they had settled in India and became a part and parcel of native population. But though Varahamihira was an adept in all these sciences which he inherited from his fore-fathers, he also possessed some knowledge of all those disciplines and arts which were cultivated in India in ancient times.

Thus he is a fitting symbol of synthetic and assimilating character of Indian Civilisation. To study the works of such a person from the historical point of view is a rare pleasure.

As said above I have for the first time utilised all the works of Varahamihira for this study. Of them the Samasa Samhita is quite untraceable, it exists only in quotations in commentaries. All those quotations have been culled and reproduced in a systematic form in the appendix so as to give an idea of the whole work.

I wish to express my grateful thanks to all previous writers whose work I have utilised in the preparation of this thesis. The immense help and light which I have derived from them are not a mere matter of formal acknowledgement. I owe an obligation to the two volumes of the Brhat

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Samhita edited by Sudhakar Dvivedi with a commentary of Utpala. And to the two volumes of Brhat Samhita edited and translated into English by V. Subramanya Shastri and M. Krishna Bhata which have been used for reference purposes in the present thesis since the former have become very rare, and also to the one compiled and translated by H. Kern. For the Panca Siddhantika, I owe to Thibaut for his editing in collaboration with Sudhakar Dvivedi and translation with an invaluable introduction to the said volume. I must also express my gratitude to the Director of Astronomical Institute, New Delhi, for having consulted the manuscript of the Brhad Yoga Yatra made available by him.

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ABBREVIATIONS

AI	Alberuni's India, ed. Sachau
ABORI	Annals of the Bhandarkar Oriental Research Institute, Poona.
Acharya Architecture	Dictionary of Indian Architecture, London, 1927.
AGI	Ancient Geography of India by Cunningham, Delhi, 1965.
AIHT	Ancient Indian Historical Tradition by F.E. Pargiter, London, 1922.
Altekar Women	Position of Women in Hindu Civilisation by A.S. Altekar.
Amara	Amarakosa.
APS	Apastamba Dharma Sutra
Artha	Arthasastra of Kautilya ed. R. Shamashastri, Mysore, 1929.
AS	Arthasastra of Kautilya
ASIAR	Archaeological Survey of India Annual Reports.
As Res	Asiatic Researches
ASSI	Archaeological Survey of South India
Asta	Astadhyayi of Panini
ASWI	Archaeological Survey of Western India
BG	Bhagavad-Gita
BDS	Baudhayana Dharma Sutra
BI	Buddhist India by T.W. Rhys Davids
BJ	Brhajjataka of Varahamihira
BS	Brhat Samhita ed. V. Subrahmanya Shastri and M. Krishna Bhatt, Bangalore, 1947.
BVBJ	Bharatiya Vidya Bhawan Journal, Bombay.
BYY	Brhad Yoga Yatra of Varahamihira
CA	Classical Age ed. R.C. Majumdar and A.D. Pusalker, Bombay, 1954.
CASR	Cunningham's Archaeological Survey Reports
CBIMA	Catalogue of Brahmanical Images in Mathura Art by V.S. Agrawala
CCAI	Catalogue of the Coins of Ancient India (in the British Museum) by J. Allan, London, 1936.
CHI	Cambridge History of India, vol.I, Delhi, 1955.
CII	Corpus Inscriptionum Indicarum
CL	Carmichael Lectures (1918) by D.R. Bhandarkar.
CSPMBBRAS	Catalogue of Sanskrit and Prakrit Manuscripts in the Library of the Bombay Branch of the Royal Asiatic Society, Bombay.

Dey	The Geographical Dictionary of Ancient and Mediaeval India, by N.L. Dey, London, 1927.
DHI	Development of Hindu Iconography by J. N. Banerjea.
DKC	Dasakumara Carita of Dandin
DLI	Daily Life in Ancient India by Jeannine Auboyer
ED	History of India as told by her own Historians by Elliot and Dowson
EHI	Elements of Hindu Iconography by T.A. Gopinath Rao
EHVS	Materials for the Study of Early History of the Vaisnava Sect by H.C. Raychoudhuri.
ESAI	Ethnic Settlements in Ancient India by S.B. Chaudhuri, Calcutta, 1955.
ETSAI	Evolution of Theistic Sects in Ancient India by S. Chattopadhya, Calcutta, 1962.
EI	Ephigraphia Indica
GAMI	Geography of Ancient and Mediaeval India by D.C. Sircar.
GBI	The Greeks in Bactria and India by W.W. Tarn
GDS	Gautama Dharma Sutra
GE	Geographical Essays by B.C. Law, London, 1937.
GEB	Geography of Early Buddhism by B.C. Law, London, 1932.
Giles	The Travels of Fa-hsien by H.A. Giles
HA	Hindu Astronomy by Brennand
HC	Harsa Carita of Bana
HD	History of Dharmasastra by P.V. Kane
HDIM	Historical Development of Indian Music by Prajnananda, 1960.
HGAI	Historical Geography of Ancient India by B.C. Law
HIA	History of Indian Astronomy by S.B. Dikshit.
HIM	History of Indian Music by B.A. Pingle, 1962.
HIIA	The History of Indian and Indonesian Art by A.K. Coomaraswamy
HT	Hindu Temple by S. Kramrisch
IA	Indian Antiquary
IC	Indian Culture
IGI	Imperial Gazetteer of India
IHQ	Indian Historical Quarterly
ITL	Iconography of Tibetan Lamaism by Gordon
JA	Journal Asiatique, Paris
JAHRS	Journal of the Andhra Historical Research Society, Rajahmundry
JASB	Journal of the Asiatic Society of Bengal, Calcutta

JAOS	Journal of the American Oriental Society
JBBRAS	Journal of the Bombay Branch of Royal Asiatic Society, Bombay.
JBORS	Journal of the Bihar and Orissa Research Society, Patna.
Jeannine Auboyer	Daily Life in Ancient India.
JIH	Journal of Indian History, Madras.
JNSI	Journal Numismatic Society of India, Bombay
JOI	Journal Oriental Institute, Baroda
JOR	Journal of Oriental Research
JRAS	Journal of the Royal Asiatic Society of Great Britain and Ireland, London
Kad	Kadambari of Bana
Kama	Kamasutra of Vatsyayana
Kern Intro	Kern's Introduction to the Brhat Samhita
Kramrisch Sculpture	Indian Sculpture by S. Kramrisch, Calcutta, 1933.
KSS	Katha Sarita Sagara
Kumara	Kumara Sambhava of Kalidasa
LGA	Life in Gupta Age ed. R.N. Saletore, Bombay, 1943.
LJ	Laghu Jataka of Varahamihira
Legge	The Travels of Fa-hien
Mal	Malvikagnimitram of Kalidasa
Maity	Economic History of Northern India in the Gupta period, Calcutta, 1957
Mana	Manasara ed. P.K. Acharya
Mark	Markandeya Purana
MASI	Memoirs Archaeological Survey of India
Mat	Matsya Purana
Mbh	Mahabharata
McC Meg	Ancient India as described by Megasthenese and Arrian by J.W. McCrindle
McC Ptol	Ancient India as described by Ptolemy Calcutta, 1825.
ME	Miscellaneous Essays by H.T. Colebrooke, London, 1837
MM	McCrindle's Ancient India as described by Ptolemy ed. S.N. Majumdar Shastri
MP	Meghaduta Purva
Mrc	Mrchakatika
MU	Meghaduta Uttara
NSP	Nirnaya Sagar Press, Bombay
Panini	India as known to Panini by V.S.Agrawala, Lucknow, 1963.
Pat	Vivaha Patala of Varahamihira
PHAI	Political History of Ancient India by H.C. Raychaudhury.
PS	Panca Siddhantika ed. G. Thibaut and S. Dvivedi, Lahore, 1930.
PS Intro	Panca Siddhantika Introduction by G.Thibaut

Rowland	Art and Architecture of India by Benjamin Rowland, 1950
Sak	Abhijnana Sakuntala of Kalidasa
SBE	Sacred Books of the East, Oxford
RT	Rajatarangini ed. M.A. Stein, New Delhi, 1961
SIHC	Studies in Indian History and Civilisation by Buddha Prakash, Agra, 1962.
SIM	Story of Indian Music by O.Goswami,1961
SLAI	Social Life in Ancient India by S. Chattopadhyaya, Calcutta, 1965.
Shastri BS.Intro	V. Subrahmanya Sastri's Introduction to the Brhat Samhita
SSD	Samarangana Sutra Dhara
TAI	Tribes in Ancient India by B.C. Law, Poona, 1943.
TLP	Two Lamaistic Pantheons ed. W.E. Clark
Utpala	Brhat Samhita Commentary by Utpala ed. M.M. Sudhakar Dvivedi, Varanasi,1895
VA	Vedic Age ed. R.C. Majumdar and A.D. Pusalker, London, 1952.
VD	Visnudharmottara
VDS	Visnu Dharma Sutra
VGA	Vakataka Gupta Age ed. R.C. Majumdar and A.S. Altekar, Lahore, 1946.
VH Intro	A.N.S. Aiyangar's Introduction to Varahamihira's Horasastram.
Vik	Vikramorvasi of Kalidasa
VK	Visvakarma Prakasa.
Watters	On Yuan Chwang's Travels in India by T. Watters
WTI	Wonder that was India by A.L. Basham, London,1954.
Yaj	Yajnavalkya Smriti
YY	Yoga Yatra of Varahamihira
ZDMG	Zeitschrift der Deutschen Morgenlandischein Gesellshaft

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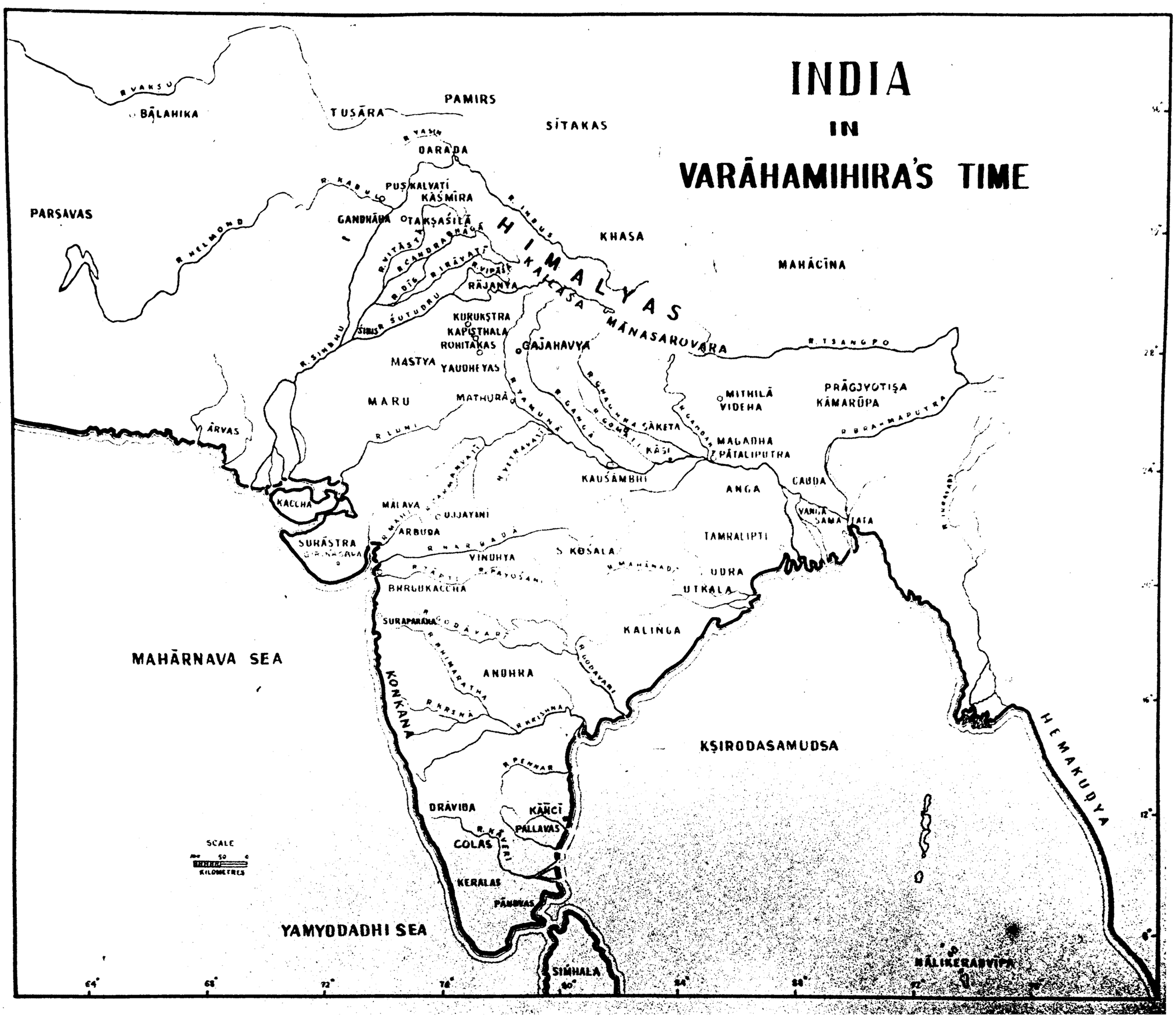
INDIA
IN
VARĀHAMIHIRA'S TIME
BĀLAHIKA
TUSĀRA
PAMIRS
SĪTAKAS
DARADA
PUṢKALVATĪ
KĀŚMĪRA
PARṢAVAS
GANDHĀRA
TAKṢAŚILĀ
KHASA
MAHĀCĪNA
HIMALYAS
RĀJANYA
KURUKṢTRA
KAPIṢTHALA
ROHITĀKAS
GAJAHVYA
MĀNASAROVARA
MASTYA
YAUDHEYAS
MARU
MATHURĀ
MITHILĀ
VIDEHA
PRĀGJYOTIṢA
KĀMARŪPA
ĀRVAS
SĀKETA
MAGADHA
PĀṬALIPUTRA
KĀŚĪ
KAUŚĀMBHĪ
ANGA
CAUḌA
VAṄGA
SAMATAṬA
KACCHA
MĀLAVA
UJJAYINĪ
ARBUDA
TAMRALIPTI
SURĀṢṬRA
GIRINAGARA
VINDHYA
KOŚALA
UḌRA
UTKALA
BHṚGUKACCHA
SURAPĀRAKA
KALIṄGA
MAHĀRṆAVA SEA
ANDHRA
KONKAṆA
KṢĪRODASAMUDSA
DRĀVIḌA
KĀÑCĪ
PALLAVAS
COḶAS
KERAḶAS
PĀṆḌYAS
YAMYODADHI SEA
SIṂHALA
HEMAKŪḌYA
NĀLIKERADVĪPA
SCALE
50
KILOMETRES

CHAPTER I

VARAHAMIHIRA - HIS LIFE & WORKS

SECTION I

PERSONAL LIFE

All that we know about the personal life of Varahamihira[1] is that he came of a respectable family of Avanti, well-versed in the science of astronomy and astrology. His father, Adityadasa, was a great scholar of Jyotih Sastra who taught him the science of astronomy and astrology at the village Kapitthaka.[2] He also received instruction from other teachers.[3] It is not improbable that his father being a professional astrologer might have initiated him into the studies in the Jyotih Sastra which he completed under other teachers.[4] Varahamihira describes himself as Avantyaka and Utpala uses Avanta as his secondary name and styles him as Avantakacarya.[5][6]

There are many other variants of Kapitthaka in the various manuscripts viz., Kapisthala,[7] Kapiskala,[8] Kapitthaka,[9]

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1. Varahamihira mentions his own name in BS xlvii.2; lxxxv.4; civ.64; PS xviii.61,63,65; Pat. 97; Varaha in TCSM ii p.i-a p. 2609; iv pt.1 p. 4547 no. 3608; vi pt i p. 7207 no. 5241; CSMCOML p. 9421 no. 13976; Mihira in TCSM iv. pt.i skt.a p.4357.
2. BJ xxviii.9.
3. PS i.1.
4. Ibid. xviii. 61.
5. Utpala p. 82.
6. Introductory portions of his commentaries on the BS, BJ and the LJ. Even Prthuyasas, Varahamihira's son is styled by him as Avantakacarya in the beginning of his gloss on the Satapancasika.
7. NSM vii pp. 211-12 no. 2453.
8. TCSM v. pt.i p. 6587 no. 4497; vi. pt.i p. 7196, no. 5133.
9. BJ xxviii. 9; NSM iv. pp. 206-07, no. 1633; CSMCOML p. 9421 no. 14064

Kampilyaka[1] and Kampillaka[2]. It is very difficult to ascertain the correct reading. Kapitthaka is, however, the most popular reading. Sudhakara Dvivedi follows the reading Kampilyaka and identifies it with Kalpi near Jhansi in Uttar Pradesh. This suggestion is untenable since the ancient name of Kalpi was Kalapriya and not Kampilya. Kapitthaka or Kapisthala has similarity with the name of the town Kah-pi-ta given by Hiuan Tsang[4] to Sankasya, modern Sankisa in the Farrukhabad district as well as with Kaithal in the Karnal district in Haryana, but the greater probability is that this place is modern Kayatha[5], a village about 12 miles from Ujjain, since Varahamihira is definitely associated with Avanti.

Varahamihira is mentioned in a collection of stories, legends and anecdotes spread all over India. He is the hero of so many interesting stories. Many legends of Varahamihira are associated with Vikramaditya, glimpses of which are found in the Jyotirvidabharana.[6]

The Bhavisya Purana narrates the story of how the Sun incarnated Himself as Varahamihira or Mihiracarya at Ujjayini.

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1. NSM vii. pp 211-12, no. 2463.
2. Ibid. iv. p. 11 no. 1376.
3. Sanskataranginl p. 11.
4. Watters i. pp. 333-34.
5. Vikrama Samrtigrantha (Hindi) pp. 263, 356.
6. iii. ch. 8. 99-126. cf. The Jain traditions make Varahamihira a younger brother of Bhadrabahu, resident of Paitthana (Sanskrit Pratisthana), Gacchacara Vrtti p. 93; Jain, J.C., Life in Jaina Literature, p. 319; Jacobi, H., Introduction to the Bhadra Kalpa Sutra of Bhadrabahu pp. 10 ff; See also Vidyabhusana, S.C., History of Indian Logic pp. 164 ff; Suryanarayana Rao, B., Life of Varahamihira, 2nd ed. 1945.

In the quasi-historical-biographical works, like the Prabandhacintamani of Merutunga, completed in 1306 A.D. and Prabandhakosa by Raja Sekhara, completed in 1349 A.D., Varahamihira is made a contemporary of King Nanda who ruled in the fourth century B.C.[1] In Persian lore, his name may be found in Bujurgmehr, who is said to have translated the fables of the Pancatantra into Pahlavi at the instance of Khusrou Nushirwan, king of Persia (A.D. 531-576)[2]. But there is no definite proof of it.

VARAHAMIHIRA'S PERSONAL RELIGION: Varahamihira was a devout follower of the solar cult. All the works of Varahamihira including the voluminous ones as the Brhat Samhita, Brhajjataka, Brhad Yoga Yatra and Panca Siddhantika and the minor ones e.g., the Laghu Jataka, Yoga Yatra, Jatakarnava etc. point unmistakably to his inclination to Sun worship. The opening verses in the aforesaid works invoke the Sun god, who is eulogised as the creator of the Universe, the supreme being, adorned with rows of thousands of rays[2] etc. Almost the same sentiments are expressed, though in different expression, in the other works of the astronomer. The Vivaha Patala is the only exception which opens with the salutation to Kama, the god of love. He describes himself as having received the gracious favour of the Sun and Utpala also[4]

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1. Winternitz, M., A History of Indian Literature, vol.ii p. 520. cf Sewell, R., JRAS, 1920 pp. 323 ff. Shah, T.L., Ancient India ii. p. 269; iv.pp 294, 332-39.
2. MK ii p. 283.
3. BS i.1.
4. Savitr-labdha-prasadah.

repeats the same thing.

It is significant that at least the three generations of Varahamihira known to us viz., his father, himself and his son bear the names Adityadasa, Varahamihira and Prthuyasas respectively, which mean the sun. This goes to show their reverence for the family god from which it can be inferred that the worship of the Sun, was something hereditary with Varahamihira.

It is held by A.N.S. Aiyangar[1] and K.V.R. Aiyangar[2] that Varahamihira had Vaisnavite leanings and that he came into contact with the Vaisnava saints (Alwars) who were preaching the philosophy of Vaisnavism in the Tamil country. It may be pointed out in passing that Visnu, originally a solar deity, absorbed in himself much of the elements[3] that had been attributed to Surya in the earlier days.

D. R. Bhandarkar who was the first to dilate on this problem, suggests that Varahamihira belonged to the Sun-worshipping Maga-Brahmana sect.[4] Though a considerable progress has been made in solving this Maga problem, but no satisfactory solution is forthcoming.

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1. VH Intro pp. xlvii-xlviii.
2. Ibid. Foreword p. vii.
3. Chattopadhyaya, S., EYSAI p. 58.
4. Foreign Elements in the Hindu Population, p. 12.

The commentator of Varahamihira, Utpala[1] in his commentary on the Brhat Samhita describes Varahamihira as 'Magadha-dvija' which evidently means ' a Brahmana from Magadha'. But in the Brhajjataka, Varahamihira describes himself as 'Avantika' or 'belonging to Avanti', which is again confirmed by Utpala who refers to him as 'Avantikacarya'. Kern suggests that the family of Varahamihira originally belonged to Magadha but settled down in Avanti permanently. Had it been a fact, Varahamihira would not have remained reticent about his Magadha extraction. His silence raises doubts about the authenticity of the reading and its real implication.

D.R. Bhandarkar, by citing the Bhavisya Purana[2] equates the two terms Maga and Magadha.[3] From his discussion it follows that Varahamihira was a Maga Brahmana[4] and hence a devotee of Mithraism, the Iranian solar cult. S.K. Sanjana invites our attention to a verse of a Zarathushtrian scripture named the Meher Yasht (Yasht X), according to which, while Meher (the Sun) advances, he is accompanied by Verethraghna (Vritrahana or Behram) in the form of a Varaz (Varaha or Boar).[5] From this Avestan passage one can see the close connection between Varaha (Boar)

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1. Utpala vol. 1 p.2. cf Kanakatarangini pp. 12-16.
2. 1. 117.53 (Venk. Press ed.) p. 104.
3. Bhandarkar, D.R., op.cit. p. 13. cf Risley, Tribes and Castes of Bengal, vol. 1, pp. 159-60.
4. IHQ xxv pp. 175-82.
5. Davar, F.C., Iran through the Ages, p. 66.

and Mihira (Sun). And since the name 'Mihira', as is well known has been derived from 'Mithra' the name of the Sun-god of Iran with which the Magi priests of Iran who are identified as Maga Brahmanas of India are intimately connected, it should suffice to suggest that Varahamihira was a Maga Brahmana.

It may here be necessary to trace out the history of the Maga Brahmanas and that of Mithraism, the Iranian solar cult, vis-a-vis its Indian counterpart to have full appraisal of the problem.

INDIAN SAURA CULT: The Aryan speaking people are generally associated with the nature-worship as evidenced by/earliest[1] / the vestiges of their culture. The primitive Indo-Europeans worshipped only nature gods such as sun, sky, wind etc., and a fire cult[2], and the undivided Indo-Iranians, recognised a Soma-cult in addition to the older fire cult, and the abstract deities besides the older nature gods.[3]

The Rgveda is the earliest record of India wherein we find worship of various objects of nature conceived as a living entity including that of Sun. The beginnings of the Sun worship in India may, however, date back to the Harappan period, as evidenced by the representations on some Indus Valley seals, of Swastika and the wheel which are regarded as the symbols of the sun. The sun is represented on these seals

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1. The Kassites, who are known to have captured Babylon in about B.C. 1760, used the word 'Surias' to designate the sun. Meyer, E., Geschichte des Alterums, 3rd ed. vol 1, p.456.
2. The fires of the Prytaneia in Greece, Vestal fire of Rome, Garhapatya fire of India - Keith, Religion and Philosophy of the Veda and Upnisads, ii, pp. 625-26.
3. Like the Vedic Rta = Avestan Asa (to be pronounced Arra, from Arta).

symbolically and not anthropomorphically and that it is difficult to reach any definite conclusion at present as to the state of progress of the cult in view of insufficient data available.

But the worship of the sun in anthropomorphic shape was widely spread during the Vedic age which opens before us a vista of the mythological account of Surya, vis-a-vis the other deities which either sprang from him or were very closely associated with him. The Vedic hymns are replete with references to his various aspects. Surya is said to be the son of the goddess Aditi and of Dyaus. Aditi which means 'non- binding' is apparently invoked to release her worshipper from bondage. She is connected with light in the Rgveda. Her eight sons, known as Adityas or Aditeh Putrah, namely Varuna, Mitra, Aryaman, Bhaga, Daksa, Amsa, Surya and Martanda, are enumerated in the Rgveda.[1] They are all gods of light. Surya himself being one of the Aditya Putrah is thus intimately connected with other seven Adityas or nature gods mentioned above. Dyaus is a personification of the sky. He is oldest among the gods of heaven going back to the Indo-European period and is identical with the Greek Zeus.

Usas, the goddess of Dawn, hailed as the daughter of heaven and ever-youthful,[2] is closely associated with Surya. He is her lover, but as she precedes him, she is also said to be his mother. She is the sister of night. She is also associated with Agni.

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1. II. 27.1; x.72.8-9. The first three are Indo-Iranian in origin, the next three are the deified abstractions and Martanda denotes the setting sun. The theory of Oldenberg (Religion des Veda, pp. 185 ff) that the group of divinities known as Adityas was borrowed from a semitic account, has little to commend it.
2. RV. 1.48 (Dawn-hymns).

The twin deities, known as the Asvins, sons of Dyaus, are associated with Surya who is either the sun conceived as a female or the daughter of Surya.[1] They are the two husbands of Surya whom they carry in their car. They are divine physicians with several legends of miraculous cures to their credit.[1-a] Savitri, the deity of the famous Gayatri hymn, is invoked to confer his splendour on, and stimulate the thoughts of the worshipper. Like Surya he is connected with morning as well as with the evening time. But/he is said to shine with the /when rays of the sun[2] he is evidently distinguished from Surya. He is, therefore, identical with as well as distinguished from Surya. The Pusanna, originally a solar deity, acts as the envoy of Surya with golden aerial ships, and as a charioteer driver downward the golden wheel of the sun.

Indra, known for his warrior activities, is specially invoked at the mid-day libation showing thereby that Indra was originally a god of light and hence associated with solar system. Indra is also closely associated with Agni as he is said to be his twin brother, both being sons of Dyaus. Visnu, a minor deity in the Rgveda, who is described as setting in motion, like a revolving wheel, his ninety steeds (days) with their four names (seasons, an evident allusion to the three hundred and sixty days of the solar year), is probably a personification of the activity of the sun. Agni, a personification of sacrificial fire, is said to be born as the rising sun in the

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1. Vedic Age, p. 269.
1-a. RV iii. 62, 10.
2. Ibid. vii. 63.

morning and the sun is regarded as a form of Agni.[1] Thus, ultimate unity underlying divine diversity shows that a large number of deities of Rgvedic pantheon, as has been shown above, is the manifestation of one united force. The anthropomorphism of the physical appearence of Agni is naturally very slight. Surya is, however, the most concrete of the solar deities, the name (which designates the orb of the Sun as well as the god) showing that his character as luminary was always present in the mind of the poets. As the all-seeing god, he is often called the eye of Mitra, Varuna, Agni and other gods. Surya therefore emerged as the all pervading figure dominating the Rgvedic mythology. Thus, the Rgveda presents a very comprehensive picture of the solar cult in which the Sun is extolled as the highest deity whence all the gods either take their birth or are associated with it in one way or the other.

In the later Vedic age, Surya is identified with Brahma (Asavaditya Brahma)[2] in one of the Upanisadic passage, the highest religious entity of the time. If we believe that the post-Upanisadic religious belief was characterised by a return to the concrete and the personal, almost by a kind of dialectic movement of the mind, the vivid personification of the visible physical object - the Sun - can be easily understood.[3] The Sun god still formed his votaries among the Smartas and the different Grhyasutras enjoin his worship for the attainment of riches, fame and long life. The gradual decline in the worship of god Surya in the post-Upanisadic period is due to its universal character which had influenced many of the orthodox

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1. RV vii.2.1.
2. Comprehensive History of India, p. 405.
3. Imperial Unity, p. 465.

and even heterodox cults of India in their origin and evolution. Visnu, primarily a solar deity, absorbed in himself much of the elements that had been attributed to Surya in the earlier days. The rise of Vaisnavism with Visnu emerging as its dominant figure was one of the most important factors contributing to the lessening of importance of the sun god. The cult of the sun was often associated with Buddhism. Another reason for the decline[1] may have been the enmity of the Saivas, especially the Pasupatas with the Sun worshippers.

This should not, however, lead us to infer that the Saura cult was altogether eclipsed. But it may be true to say that it had lost its pre-eminent position of the earlier days to Vaisnavism and Saivism, its growth had considerably retarded and it was progressively on the decline as we head towards Christian era. The mention of goddess Suryavarchasa, the daughter of Tiśśaru, who may be the same as Suvarchasa, one of the wives of Surya, named in the Brahmanical texts, in the Digha Nikaya[2]; vivid description of ornaments and adornments of Surya in the epics; and the names borne after the deity by some of the characters of the Mahabharata may suggest that the Sun was still a familiar cult-object during the time. The Mahabharata[3] further informs us that there were a thousand and eight others who worshipped the Sun (lit. Sauras) in the camp of the

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1. Mbh. xii. 160.18-19.
2. Mahasamaya Suttanta p. 288.
3. Mbh. vii. 82.16.

Pandavas. The Ramayana[1] (first century B.C.) speaks of the ascetic Urdhabahus who stood on the river Mandakini with arms upstretched praying to the Sun. Some figures on ancient coins and Bharhut medallion containing a human bust of the Sun, with the petals of a lotus representing his rays, and the Bodhgaya[2] and Bhaja reliefs depicting the Vedic deity seated in a quadriga in company with two female figures (probably Usa and Pratyusa), the horses and wheels of which are shown trampling upon uncouth figures identified as demons of darkness[3] are also indicative of the prevalence of Saura worship in the pre-Christian era.

We have seen above that the Saura cult had reached its lowest ebb towards the close of the pre-Christian days. The general trend, however, seems to gradually flow in favour of the Saura cult with the beginning of the Christian era. In the so-called Saka-Kusana age, the figure of Surya undergoes a notable change. These figures represent the deity with shoes etc., and are in general agreement with the description of Varahamihira, though they stand in great contrast to that of the Vedic ideal represented in the figures of Bodhgaya and Bhaja referred to above. Varahamihira specifically mentions that the figure be attired in 'the dress of a Northerner' i.e. Udicyavesa which consists of a long heavy cloak covering practically the whole of the body, and some sort of 'boots'[4] or 'leggings' - and Avyanga, which is an Indianised form of

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1. 11. 65.7.
2. Rowland, B., The Art and Architecture of India, p. 54.
3. Kramrisch, S., Indian Sculpture, p. 160.

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Aivyasonghana, the sacred waist-girdle of the Persians, still prevalent among the Parsis of India, the followers of Zoroastrianism. The dress of a 'Northerner' as described by Varahamihira was not prevalent among the Indians. But this type of dress was very much in use by the people of the scythian stock such as the Sakas, Pahlavas and Kusanas. The headless inscribed statue[1] of Maharajadhiraja Devaputra Kaniska in the Mathura Museum typifies this mode of dress. Some sun-icons of the age of the early centuries of the Christian era found mostly from northern India also betray such evidences. These figures of the Sun god exhibit characteristically foreign dress and mark a significant change in the mode of sun worship in India. No doubt then that the sun worship which was gradually regaining importance during the age was inspired by the powerful foreign influence which may well be sought from Iran where Mithraism, a solar cult, was prevalent, which, it seems, absorbed many elements from Zoroastrianism. Its priests known as Magi in Iran and Maga Brahmanas in India ,

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4. An account of the introduction of shoes made of animals' skin is told in the Epic (Anusasana chs. 95-96) in which the sun god in the guise of an old man presented to the sage Jamadagni, a pair of shoes along with an umbrella as protective devices against the burning rays of the sun. This may not account for the foreign influence but it only shows the association of shoes with the sun-deity. The exotic influence is, however, evident in the description itself.

1. Agrawala, V.S., Indian Art, fig. 158, opp. p. 240.

must have entered India in the pre-Alexandrian period, most probably during the time of the Achaemenids who extended their domination on the north west of India upto the Punjab which formed the 20th satrapy of their empire. The provenance of the solar cult of the Magians in the kingdom of Porus is evidenced by the accounts of Plutarch who states that there was a temple of the Sun on the Hydaspes, and another at Taxila, according to Philostratus[1] and further supplemented by the absence of any reference to a temple in the Indian account of Saura cult, according to R.G. Bhandarkar.[2]

MITHRAISM AND IRAN: Mithra, the Indo-Iranian divinity, which in Avestan means compact, is the central figure of worship in Mithraism. He is preserved in the same form in the Boghazkoi inscriptions[3] (c. 1500 B.C.) and the early poetry of Iran.[4] The early history of the worship of Mithra in ancient Iran is shrouded in obscurity. The Mihir Yasht[5] is the most important source of our knowledge of Mithra worship among the Iranians, whose opening lines clearly bring out the exalted position enjoyed by Mithra. Throughout the Yasht the invincible might of Mithra is invoked against Mithradruj, which may be translated as either 'deceiver of Mithra' or 'promise-breaker'. He is also invoked, like other divinities, as the

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1. Cunningham, Coins of the Sakas, pp. 22 ff.
2. Vaisnavism, Saivism, etc. p. 221.
3. Christensen, Kulturgeschichte des Alten Orients, p. 211.
4. Mole, M., Culte,Mythe et Cosmologie, dans L'Iran Ancien, pp. 37 ff.
5. Darmesteter, J., (Eng. trans) SBE xxiii. 1883.

protector of the needy. It is,more than anything else, his guardian-ship of truth and good faith that gives Mithra a special character.[1] It is very difficult to give precise nature and mode of worship of Mithra in the early period in the absence of sufficient data coming down to us. Nevertheless according to the account of the Avesta wherein the doctrines of Zarathustra are described, the cult of Mithraism was replete with sacrificial practices and associated with some sort of drinking of intoxicating juice of the Haoma[2], the same as Soma of the Rgveda.

The Prophet Zarathustra regarded Mithra as a Daeva or demon[3], whose worship was to be banished from the pure faith. The Yasht tells us little of the ritual of Mithra worship. According to it, however, Haoma and milk were offered to Mithra in libation and a Mazdayasnian was bidden to sacrifice 'beasts small and great, and birds that fly'[4] and prepare himself for the sacrifice by ablutions and penance. However, the cult of Mithraism was by far the most important form[5] of worship in the pre-Achaemenian period. It was during the ascendancy of Median suzerainty over the whole of Iran under Cyaxares that Mithraism spread into every corner of the Iranian dominions engulfing the whole of Iranian life. The worship of Mithra attained such heights among the Iranian peoples as

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1. Encyclopaedia of Religion and Ethics, p. 752.
2. Durant, W., The Story of Civilisation, vol.i, p. 365.
3. Moulton, J.H., Early Religious Poetry of Persia, Cambridge, 1911.
4. Yasht x.119.122.
5. Durant, W., op.cit. p. 365.

were never seen by its counterpart in India.

During the Achaemenian period, Mithraism saw its decline for a brief period due to the rise of Zarathustra, whose doctrines were certainly acknowledged by Darius I as will be seen later, who mentions the name of Ahura Mazdah, the supreme god of Zarathustra's religion in his inscriptions. The inscriptions of his predecessor Cyrus are conspicuous by the very absence of the mention of any Iranian divinity, while Artaxerxes Mnemon (403-358 B.C.), one of the successors of Darius the Great, names Ahura Mazdah, Anahita and Mithra as his divine protectors.[1]

At the close of the Yasht, Mithra and Ahura Mazdah are jointly invoked,[2] just as Mitra and Varuna in the Vedic hymns. It goes a long way to suggest that Mithraism could not be ousted from the soil of Iran despite the strong opposition by Zarathustra but on the other hand Zoroastrianism, we find, joined hands with Mithraism and ushered in period of harmony in place of heart-burning and animosity. But eventually, as we shall see later in the chapter, Mithraism succeeded in toppling the supremacy of Zoroastrianism in course of time.

From Iran the cult of Mithra spread into other parts of the world as well. In Asia Minor, Mithra, in spite of the many differences of nature and function, became associated with Attis. Mithra is represented in Iranian costume with

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1. Encyclopaedia of Religion and Ethics, p. 752.
2. x. 145. of Ibid. 113.

the radiate nimbus on the enormous cairn set up by Antiochus I of Commagene (69-38 B.C.). On the coins of Trapezus, he is similarly attired in Iranian dress, but is shown on horseback flanked by the figures Cautes and Cautopates.[1]

The cult of Mithras is said to have been brought to Rome by Cicilian pirates taken captive in 67 B.C. The diffusion of Mithraism in Rome, however, had largely been the work of the Roman army which had absorbed a considerable oriental element. Mithraic monuments and inscriptions became common in the west during the Antonine period. Imperial patronage as well as popularity of Mithra-worship in the 3rd century A.D. is evidenced by the representations of Zeus- Helios - Sarapis - Mithras on an inscription of Caracalla. The sacrifice of the bull, the prototype of which was the slaying of the bull by Mithra himself, which appears to have been the central act of worship in Mithraism, is represented in reliefs in every Mithraic sanctuary. The places of worship were described by the terms Spelaeum, Crypta and Antrum and were often established in natural caves or grottos e.g., on the north slope of the Capitol of Rome, beneath the church of Araceli.[2]

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1. Encyclopaedia of Religion and Ethics, p. 754.
2. Ibid. p. 757.

MITRA IN INDIA: Mithra appears in the form of Mitra in the Vedic pantheon. Rgvedic evidence points out to Mitra as a solar divinity in the aspect of benevolent power of nature as suggested by the name Mitra which originally meant 'an ally'. In the only one hymn exclusively addressed to him in the Rgveda, Mitra is said to 'bring men together, uttering his voice and to watch the tillers of the soil with unwinking eye'. His distinctly peculiar epithet is Yatayaj-jana, the 'bestirrer of the people', because he marshals people into activity as the great Aditya. Mitra and Surya are enumerated among the Adityas who are described as Aditeh Putrah, 'sons of Aditi'. Since both are connected with light as pointed out earlier they were originally worshipped as Sun gods. Surya is often called as the 'eye of Mitra'. In the Vedic pantheon, therefore, Mitra is identical as well as distinguished from the Surya.

In the Brahmanas, indeed, the view prevails that Mitra represents the light of day, especially that of the Sun, while to Varuna belong the ' thousand eyes' of night. Mitra is very closely associated with Varuna. Mitra and Varuna are conjointly address-ed in the numerous hymns of the Rgveda. Varuna is also mentioned along with Mitra among the Adityas in the Rgveda. It is abundantly clear that both divinities are manifested in the celestial light. Ethically

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1. RV iii. 59.
2. Ibid. ii. 27.1.
3. Ibid.

the two gods were probably differentiated in the Indo-Iranian period, Varuna being the supreme upholder of physical and moral order, Mitra the all-seeing witness who guarantees good faith between man and man.[1] It is more probable that Varuna was by origin the all-encompassing vault of heaven (/ var, 'cover'), Mitra the light which proceeds therefrom.

It is quite possible to infer from the above account that the Vedic deity Mitra was eclipsed and lost his natural basis to the all-pervading nature of Surya himself on the one hand and absorbed to a great extent by the cult of Varuna on the other. Surya considered to be the representative deity of the solar cult in India and could not be replaced by Mitra or its counterpart Mithra, the Iranian Sun god, though it came to absorb many elements of the Mithra cult during the Saka-Kusana period as will be seen elsewhere in this chapter.

ZOROASTRIANISM: The Iranian religion in the pre-Achaemenian period was replete with a number of sacrificial practices that were performed to invoke the various gods, the chief among them being Mithra, god of the Sun; Anahita, goddess of Fertility and the earth; and Haoma, the bull god. The religious conditions of Iran in a nutshell were no better than that of India of the corresponding period of the Brahmanas.

When Zarathustra appeared on the Iranian scene, he found his people worshipping animals, ancestors, the earth

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1. Encyclopaedia of Religion and Ethics, p. 752.

and the sum, in a religion having many elements and deities in common with the Hindus of the Vedic age.[1] He voiced against the superficialities of the Iranian religion and its priestly class 'Magi' by waging an incessant war against these primitive rituals and bequeathed to Iranians the religion of Ahura-Mazdah, the Lord of Light and Heaven, the supreme deity, popularly known as the Zoroastrianism.

The sayings and prayers of Zarathustra are compiled into a collection of books known as Avesta or Zend-Avesta. Ahura Mazdah is interpreted by Zarathustra as having seven attributes: Light, Good Mind, Right, Dominion, Piety, Well-being, and Immortality.[2] He was thus the sum total of all these forces in the world that make for righteousness; and morality lay in co-operation with these forces.

The general conception of ethics of Zarathustra were simple code of morals, the central idea of which was "that nature alone is good which shall not do unto another whatever is not good unto its own self". The position of Zarathustra is similar to that of the Buddha[3] or Mahavira in

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1. Durant, W., op.cit. p. 305. For details see Mole, M., op.cit. pp. 3 ff. Benvenisto also demonstrates that the Iranian religion of the Achaemenian age, as described by Herodotus, shows significant points of similarity with the Vedic religion (The Persian Religion, Ratanbai Katrak Lectures, Paris, 1929, pp. 32 ff.). See also Mole, M., op.cit., pp. 10 ff.
2. Durant, W., op.cit., p. 307.
3. For the influence of Zoroastrianism over Buddhism, see Eliot, Hinduism and Buddhism, vol.iii, pp. 449 ff.

India who purged the Vedic religion of its sacrificial extravagance and preached in turn a simple religion of ethics and morality.

Ahura Mazdah is described as being clothed with solid vault of the firmament as his raiment, his body is the light and the sovereign glory; the sun and the moon are his eyes.[1] Zoroastrian Iran tolerated neither temples nor idols; altars were erected on hill-tops, in palaces, or in the centre of the city, and fires were kindled upon them in honour of Ahura Mazdah or some lesser divinity. Fire itself was worshipped as a god, Atar, the very son of the Lord of Light and the undying Fire of the skies, the Sun, was adored as the highest and most characteristic embodiment of Ahura Mazdah.[2]

The Achaemenian emperor Darius I was the first monarch to accept the new doctrine of Zarathustra. The effect of Zoroastrianism was so profound over him that he had got the old cults viz., Mithraism etc. banned in the kingdom and persecuted the Magian priests. Zoroastrianism was made the State religion and Ahura Mazdah became the spiritual expression as evidenced by his elevation as the Great

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1. Durant, W., op.cit., p. 366.
2. "The morning Sun," said the Scriptures, "must be reverenced till mid-day, and that of mid-day must be reverenced till the afternoon, and of the afternoon must be reverenced till evening... while men reverence not the Sun, the good works which they do that day are not their own" - Shayast-la-Shayast, vii. 6.7.1.

God in his inscriptions.

In the beginning the conception of God in the Zoroastrianism was monotheistic[1] but later became polytheistic in the hands of the people who started personifying these attributes and deified them as Amesha Spenta, 'immortal holy spirits'. Zarathustra was against the offering of sacrifices and intoxicating Homa juice to the gods, but curiously enough the people continued to offer flowers, bread, fruit, perfumes, oxen, sheep, camels, horses, asses, stags, and even the human victims,[2] as elsewhere, to the Sun, to Fire and to Ahura Mazdah.

After the death of Zarathustra, the old priesthood of Magi conquered him (Zarathustra) as 'priesthoods conquer in the end of every vigorous rebel or heretic by adopting and absorbing him into their theology'.[3] The cults of Mithra and Anahita were so deep-rooted in the Iranian society of the age that inspite of unfavourable conditions they could retain their popularity and appeal among the masses and in course of time their names started appearing again in the royal edicts from the times of Artaxerxes II onwards, which turned the tables in favour of Mithra. The cult of Mithra as a divine youth of beautiful countenance with a radiant halo over his head as a symbol of the Sun, emerged as the most powerful faith which engulfed, as already pointed out, apart

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1. Eliot, op.cit., vol. iii p. 449.
2. Herodotus, vii. 114.
3. Cambridge Ancient History, iv, p. 211.

from Iran and adjoining regions, the whole of the Roman empire and North India.

Year by year the Zoroastrian elements in Iranism religion faded away, they were revived for a time under the Sassanid Dynasty (226-651 A.D.), but were finally eliminated by the Muslim and Tartar invasions of Iran. Zoroastrianism survives today only among small communities in the province of Fars in Iran and the Parsis of India.

MAGAEi The term Maga is identical with the Magi, the protagonists and the priestly class of Mithraism. The Magis or Medes were an indigenous people of Media[1] lying on the southern side of the Caspian Sea, with their famous metropolis at Ecbatana, forming the northern part of modern Iran. The first ever mention of the Medes is found on a tablet recording the expedition of Shalmaneser III into a country called Parsua,[2] in the mountains of Kurdistan (837 B.C.).

The Medians proved a very important people in the history of the world. Under the leadership of their king Cyaxares, they brought about the downfall of the old world by destroying Ninevah, the capital of Assyria, in 606 B.C. on one hand and ushered in a new era of empire building traditions in Iran on the other. The kingdom of the Media,during the time of Cyaxares, the only emperor it produced in her history, expanded into an empire embracing Assyria, Media and Persia.[3] But unfortunately within a generation after the

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1. Moulton, J.H., Early Zoroastrianism, ed. 1913, p.235; Frye, R.N., The Heritage of Persia, 1962, p. 76; Sykes, P., A History of Persia, vol. i, ed. 1951, p. 111.
2. Durant, W., op.cit., p. 360.
3. Ibid., p. 361.

death of Cyaxares, the Median empire came to an end and Cyrus, the brilliant ruler of the Median dependency of Anshan, in Iran, became the king not only of Iran but was also accepted by the Medians themselves as their king.

The Magi lived an austere and monogamous life with simple and unpretentious dress abstaining from non-vegetarian diet.[1] They were honest and devoid of greed and jealousy. They looked after the rites of marriage, burial and the like.[2] They were also well versed in astronomy and astrology, and through this science are connected in the legend of 'the Wise Men from the East', with the birth of Christ. It is quite possible that the activity of the Magas in India might have given a sufficient impetus to the popularisation of the science of astronomy and astrology. The sun, the centre of the whole planetary system, is of supreme importance for astronomers. The Magas who were thus quite expert in this field, held the sun in great respect and later on deified it. The very word magic is taken from their name. The Magis were thus custodians of the national religion and wielded strong and valued influence and commanded respect in the society.[3]

In their short tenure of supremacy, the Medes proved a great asset to the Iranian culture. Their influence can

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1. Hdt. vi. 11.
2. The Chaldaeans contributed a lot in the sphere of astrolatry to the civilisation of the Medians - Encyclopaedia of Religion and Ethics, p. 754. See also Jackson, A.W., 'Sun, Moon and Stars', Encyclopaedia of Religion and Ethics, vol. xii, p. 85; Benveniste, E.E., Les Mages dans L'ancien IRAN, 1938, Paris; Barnett, W., op.cit., p. 372.

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be traced in every walk of the Iranian life and civilisation. According to Durant,[1] the Medes gave to Persia their Aryan language, their alphabet of 36 characters, extensive use of the column in architecture, moral code of conscientious husbandry in time of peace and limitless bravery in time of war, Zoroastrian religion of Ahura Mazdah and Ahriman, and system of patriarchal family. The Median influence is evident on the dress and ornaments of the Iranians.

Some of the funerary rites like the custom of exposing dead bodies in Dakmas, a peculiar custom of the Parsis in India till the present days,[2] was also a Median feature, which the Iranians adopted and which became a customary funeral rite of Iran in the Arsacidan period. It may be mentioned here by way of passing reference that the Achaemenian monarchs, whose Zoroastrianism cannot be seriously doubted, were placed in the elaborate grave-chambers after death and there is no reference to Dakma-type disposal of the great emperors. The Magi acquired, even among the Greeks, a high reputation of wisdom, and among their own people an almost

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3. Herzfeld, E., Zoroaster and his World, vol. i, p. 124; Zachner, R.C., The Dawn and Twilight of Zoroastrianism, p. 163; Johnson, S., Oriental Religions and their relation to Universal Religion, pp. 396-99. See also Moulton, J.H., 'Magi', Encyclopaedia of Religion and Ethics, vol.viii, p.244; Benveniste, E.E., Les Mages dans L'ancien Iran, Paris, 1938; Nyberg, H.S., Die Religionen des Alten Iran.

1. Durant, W., op.cit., p. 351.
2. It is mentioned for the first time in the Videvdat, a work of the Arsacidan age - For details see Herzfeld, E., Iran in Ancient East, pp. 216-17, 1941.

boundless influence.[1]

MAGAS AND SAKA-DVIPA: It has been seen that the Indian solar cult, in the beginning of the Christian era, came to absorb many foreign elements as manifested in the dress of the icon of the Surya described by Varahamihira, which is typical of the Scythian stock. The period coincides with the penetration of the Saka-Kusanas into India who before entering India, had spent a considerable time on the soil of Iran and imbibed strong Iranism elements in their culture. It is evidently the Magian influence which having absorbed many traits of Zoroastrianism, asserted itself during the period through the Magi or Magas, known as Maga Brahmanas in India, who were associated with the Scythians as their priestly class.

It gives rise to the questions at to who were these Maga Bra-hmanas, where was their original home and how their migration to India came about ? An effort has been made to answer all these questions in this section. It may here be necessary to explore the myth of Sakadvipa with which the story of the migration of the Magas as depicted in the Bhavisya Purana[2] is intimately connected which tells us that the Maga Brahmanas were originally the inhabitants of Saka-dvipa. The story runs like this that in the Mihira clan a sage named Sujihva or Rijihva was born. He had a

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1. Durant, W., op.cit., p. 572.
2. Brahma Parvan chs. 127-140.

daughter Niksubha by name. She had a son by Surya or the Sun god, and this child was named Jarasasta or Jarasabda who in course of time grew up to be the progenitor of the Maga sect. Once, Samba, the son of Krsna by Jambavati, had an attack of leprosy through the imprecation of the irascible sage Durvasas, whom he had offended. He lost all hopes of being cured at the human hands. He was advised by the sage Narada, to offer worship to Surya to get rid of this disease. Having obtained the assent of Krsna, Samba departed from Dwaraka, and proceeding from the northern bank of the Sindhu, he crossed the great river Candrabhaga, to the celebrated grove of Mitra (Mitravana), where, by fasting, penance, and prayer, he acquired the favour of Surya and got cured of this hateful disease. Out of gratefulness he resolved to erect a temple of the Sun god on the banks of the Candrabhaga. No local Brahmanas, however, agreed to serve as a priest in that Sun temple. Gaurasikha, the Purohita of Ugrasena, King of Mathura, asked Samba to invite the Magas to discharge the duty, as they were, in an especial degree, the worshippers of Surya. Samba went to Sakadvipa himself, lying beyond the salt-water and brought eighteen families of Magas, corresponding with the Brahman caste of India to Jambu-dvipa i.e. India.

We get the following details about the Maga-Brahmanas from the account of the Bhavisya Purana:

(1) That they are the descendants of Jarasasta or Jarasabda, born of the Sun and Niksubha, the daughter of one Brahman Sajihva or Rijihva of Mihira gotra;

(ii) That they wore a girdle, known as Avyanga, around their waist;

(iii) That the Saka-dvipa lay beyond the Salt-sea;

(iv) That a celebrated grove of Mitra (Mitravana) was situated on the banks of the river Candrabhaga which suggests that the cult of Mitra or Mithra as the name 'Mithravan' indicates, was prevalent even before the imigration of the Saka-Brahmanas into India by Samba;

(v)[1] That the population of the Saka-dvipa was divided into four classes, viz., Magas, Magadhas, Manasas, and Mandagas corresponding to the four castes of Brahmanas, Ksatriyas, Vaisyas and Sudras, in India, respectively and Magas or Maga Brahmanas as they came to be known in India, were connected with the worship of Sun.

Jarasasta or Jarasabda evidently refers to Zarathustra or Zoroaster, the founder of Zoroastrianism, the religion of the Ahura Mazdah in Iran. Following this interpretation and in view of their having various similarities with the Zoroastrianism such as the wearing or bearing of the Kureha, a technicality of doubtful import; the custom of eating in silence; their being termed Vacharcha, 'Sun-worshippers'; their having four Vedas, including the Angirasa; their use of the Varsma or Varsana as Pavitra instead of Darbha; the prohibition of touching

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1. Bhavisya Purana 1.139.73a, 73b and 74 a; MBH vi.12.33; Visnu ii.4.69; Brahma xx.71-72; Agni 119.18.21; Kurma, i.48.36-38. Utpala also describes the Magas as a class of Brahmana who were priests of the Sun(ii, p. 797).

the dead; casting a dead dog on the ground; and the necessity of worshipping the Sun just before death; as described in the Bhavisya Purana,[1] some scholars are induced[2] to identify the Magas as the followers of Zoroastrianism.

All these similarities between the Magas and Zoroastrians are very interesting and thought-provoking but going a bit deeper into the problem, such a contention can hardly be accepted. As it has already been established that the Magas were a priestly class not of Zoroastrianism but of Mithraism. The Magi were already an important class at the time of Zarathushtra, who revolted against their sacrificial cult of Mithraism and founded the faith of Ahura Mazdah, a monotheistic religion based on ethics and morality. It has further been shown that Zoroastrianism remained a religion of the elite during the period of Darius I and a few of his successors. From the time of Darius II, Mithraism again started emerging as a popular religion among the masses. More so, in the religion of Zarathushtra, Ahura Mazdah was considered a deity of Light and hence the worship of the Sun was also prevalent among them. And gradually we find a great transmission of ideas taking place between these two religions and both the sides were influenced by each other. It has also been shown that many traits which are so peculiar to the

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1. Brahma Parvam chs. 134-136.
2. Spooner, JRAS 1915, p. 425.

followers of Zoroastrianism actually emanated among the Magi, for instance, the Dakma type of disposing the dead bodies to the vultures though of Magian origin was equally popular among the Zoroastrians as well. Similarly the Magi were influenced also by Zoroastrianism, as in the case of wearing the Avyanga, the sacred girdle of the Parsis.

Hence it may be concluded that Mithraism had absorbed many traits of Zoroastrianism before it penetrated into India and the account preserved in the Indian Puranic literature is some sort of composite of Mithraic and Zoroastrian traditions. So, when we talk of the Magas or Mithraic influence in the context of India, it should be interpreted as absorbing certain traits of Zoroastrianism.

The new solar cult, as shown above, entered India from Saka-dvipa. But the location of Saka-dvipa is shrouded in mystery and there is no consensus of opinion among the scholars on the point. According to the Bhavisya[1] Purana Saka-dvipa, as already stated, is situated away from Jambudvipa on the other side of the Salt ocean, and is said to be surrounded by the sea of milk, whereas the Mahabharata[2] states that the Kairodasagara or the Caspian Sea[3] was encircled in parts by the Saka-dvipa. Gerini[4] has

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1. Brahma Parvam, 139.71b, 72a.
2. Bhisma xi. 9-10. cf Vayu 49.99.
3. See Yule, Sir Henry, Marco Polo, vol. 1, p. 59.
4. Gerini, G.E., Researches on Ptolemy's Geography of Eastern Asia, pp. 164-65.

identified it with Siam, Kamboja and lower Cochin - China which is untenable.[1] Buddha Prakash who refutes the theory of Gerini, locates/in the regions to the east, north & it and west of Caspian Sea upto southern Russia. H.C. Raychoudhuri[1a] identifies Saka-dvipa with the ancient Sakasthan[2] or modern Seistan in Iran. Spooner also identifies it with Iran.

As to the derivation of the nomenclature of the Saka-dvipa it can also hardly be confirmed whether the term is known after the race or a people inhabiting the region or it takes its name after a tree. The Visnu Purana[3] and the Mahabharata[4] derive the name Saka-dvipa from the 'Saka tree' the modern Sagavana.[5] In India the word Sagavana, a corruption of Sanskrit Saka is used up to this day to denote the teak tree.[6] According to the Matsya Purana however, there was a Saka mountain in the Saka-dvipa and hence the land takes its name after the name of the mountain.[7] The Vayu Purana states that this land had once been a network of some rivers and their tributaries had the shape of a Saka tree. This may also mean that

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1. 'Sakadvipa Purana', vol iii, no. 21, July, 1961, pp. 325-26. For other views, see JASB, 1902, pt.1,p.154.
1a. EIA, p. 68.
2. JRAS 1915, p. 436.
3. vol ii, pp. 198-200.
4. Mbh bk vi, p. 38 (Roy's trans.).
5. cf JRAS 1915, p. 436.
6. ch. 122.56.
7. ch. 49. 58-59.

the delta of some rivers of this land had this shape. The various Sanskrit sources, however, are of the view that the river Vaksu or Oxus passed through the Saka-dvipa.[1] Hence the Indian sources are unanimous on the point that the Saka-dvipa was located around the Caspian Sea and further the name probably was derived from a variety of trees grown on the land and according to a few sources, the river Oxus flowed in its territories.

Now turning to the sources other than Indian, we find that their account is more detailed than the one preserved in the Indian sources. One of the oldest references to the Sakas or Scythians is found in the Cuneiform inscriptions of Darius I, where as many as three branches of these people are enumerated, viz., Saka Somavargah (Haumavarka), Saka Tigraxauda (wearers of pointed helmets) and Saka Tyetirojraya (Taradraya i.e. the Sakas beyond the sea).[2] The wearers of the pointed helmets and the Amyrgian Sakas have been located by some scholars in widely distant regions such as the country of the river Jaxartes (the Syr Daria) and the Persian province of Drangiana, the country of the river Helmand, which came to be known afterwards as Sakasthana i.e. the abode of the Sakas, the later Persian Sijistan and modern Seistan.[3]

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1. Vayu 47.44; Matsya 121.45; Ramayana of Valmiki, Balakanda, 43.14.
2. Sen, S., Old Persian Inscriptions, Calcutta, pp. 93,98.
3. Rapson, E.J., CHI, i, pp. 564-65.

The third branch of the Scythians has been identified by Rapsen[1] with those of Europe who dwelt in the Russian steppes on the north of the black sea.

A vivid description of Scythia is given by Herodotus[2] which runs as under:

> " Before you come to Scythia, on the sea coast, lies Thrace. The land here makes a sweep, and then Scythia begins, the Ister (Danube) falling into the sea at this point with its mouth facing the east. Beyond this tract, we find the Scythians again in possession of the country above the Tauri and the parts bordering on the eastern sea, as also of the whole district lying west of the Cimmerian Bosphorus and the Palus Maeotis (the sea of Azof), as far as the river Tanais, which empties itself into that lake at its upper end ..... Scythia, then, which is square in shape and has two of its sides reaching down to the sea, extends in land to the same distance that it stretches along this coast, and is equal every way".

Strabo[3] has a general remark to offer on this point:

> " All the tribes east of the Caspian are called Scythic. The Dahae next the sea, the Massagetae (Great Getae) and Sacae more eastward...."

Diodorus[4] practically gives the same description of Scythia as contained in the latter part of the account of Herodotus mentioned above. But during his own time or a little before him the Sakas had already extended their

1. Rapsen, E.J., CHI, i, pp. 564-65.
2. Herodotus, bk. iv.
3. Strabo, bk. xi, p. 264.
4. Diodorus, bk.ii, p. 42.
   "At first, then, they dwelt in the Araxes (the Aras) river, but since acquired territory in the mountains as far as the Caucasus, and in the steppes along the ocean and lake Maeotis and in the rest of that country as far as the Tanais river", Ibid.

territories towards the borders of India.

The foreign sources, it may be pointed out here, refer to the land of Scythia, inhabited by the Scythians which extended from the other side of the Caspian Sea in the west to the Oxus valley in the east and Seistan to the south. The Indian sources, on the other hand mention the 'Saka-dvipa' irrespective of its racial affinity. Both the foreign and Indian sources are,however, unanimous on its situation on the Caspian Sea, which may be identified with Media, lying on the southern side of the Caspian Sea, the residents of which were known as Magi, who had spread to Iran and other parts up to Afganistan and borders of India and the Oxus valley during the time of Cyaxares, the Median King who brought about the fall of Ninevah in 606 B.C. ,but later on having accepted the suzerainty of Cyrus the Great, the first Achaemenian emperor of Iran, became the leading citizens of Persia. They imbibed the traits of both Mithraism and Zoroastrianism before entering India in the first century B.C. and diffused the composite cultures into already existing religion of Mithraism. These Magi are the same as Maga of Indian sources. Hence the original home of the Magas was Media.

SAKAS: As it has already been suggested that the Saka-dvipa has nothing to do with the Sakas or Scythians. The Sakas came into contact with the solar worshippers of Medo-Persian origin before they penetrated into India. They

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must have stayed in their company for a long time on the Iranian soil and imbibed their cultural traits and disseminated them into the Indian civilisation.

The Sakas as will be seen in the Chapter III on Geographical data were an ancient nomadic people living all along the northern borders of Iran during the times of the Achaemenians and had later a strong concentration in Central Asia during the Arsacids. They[1] were a great menace to the great civilisations of Media, and Iran during the times of Achaemenids and Arsacids and finally brought about the fall of the Greek power of Bactria. It is during these times that they entered into India[2] towards the second half of the first century B.C. and ruled for a brief period of about half a century over Taxila before giving in to the Parthians.

The Scythians or the Sakas as they are known in Indian literature are the most important among the foreign hordes to have played a significant role in spreading the exotic elements into Indian culture and civilisation. They

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1. Herodotus tells us that the Scythians before the time of Darius or Darayavahush conquered the Medes and became the masters of Asia (bk. i, ch. 104; cf bk.ii, ch.110; bk.iii ch. 7) (English translation by G. Rawlinson).
2. It is held that the Sakas entered into India either through the Karakoram Pass as P. Gardner holds, or by the Dalor route through the Yasin valley, from Wakhan to the Indus and further to Kashmir and Udyana, as Chavannes suggest , for details see Tarn, W.W., The Greeks in Bactria and India, pp. 227-28; Chattopadhyaya, S., EHNI pp. ff.; CII Ii(pt i), p. xxii.

along with other foreign tribes known as the Pahlavas or Parthians, the Tusaras or Kusanas and the Epthalites or the white Hunas, opened up new vistas for Indian life, bringing closer contact with the western world.

A number of references to the Sakas testifying their settlement in India can be found scattered in the vast Indian literature. Panini is by far the most ancient authority who may be quoted in this connection. In his Ganapatha[1] the name Saka appears at many places, which is further supplemented by the Kasika[2], a commentary on his Astadhyayi (c. 7th century A.D.). Other literary sources such as the Ramayana[3], Mahabharata[4], Harivamsa[5], Matsya Purana[6], Vayu Purana[7] and Brahmanda Purana[8], Harsacarita[9], Paumacariya of Vimalasuri[10], Astanga Samgraha of Vagabhatta[11], Natyasastra of Bharata[12] and Brahma-Sphuta-Sidhanta of Brahmagupta[13], also throw a flood of light on various aspects of the life and culture of Sakas. Apart from the literary evidences the Sakas also find mention in the inscriptional accounts. They are mentioned in the Prasasti of Gautamiputra Satakarni. Their kingdom or empire 'Sakasthana' is probably mentioned in the Mathura Lion Capital inscription and in the Candravalli

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1. Asta iv.1.175; iv.3.92; v.4.38.
2. ii.1.60; iv.1.175; iv.2.120.
3. iv.42.12.
4. Mbh ii. 32.17; Bhisma 75.21; Udyog 158.20; Karna 94.16.
5. xiv. 16.
6. Dynasties of the Kali Age, p. 45.
7. Ibid.
8. Ibid.
9. ch. vi, p. 696, Calcutta ed.
10. Winternitz, A History of Indian Literature, vol.ii,p.477; Jacobi, Introduction the Parisista Parvan, p.xix,1932 ed.
11. Uttara Tantra, ch. 40.
12. ch. xvii, 50. of Keith, A.B., The Sanskrit Drama, p. 13.
13. i. 26; and ch. iv.

stone inscription of the Kadamba Mayurasarmam. Princes bearing Saka names are mentioned in several inscriptions discovered in Taxila, Mathura and western India.[1]

As will be seen in the following account, culturally the Sakas were an inferior people. They were obviously prone to be influenced by the superior culture of the Indians and were gradually assimilated into Indian population.[2] The observation of Cunningham that 'a barbarous race of conquerors settled amongst a more numerous and more civilised people soon loses its nationality' is perhaps very aptly applicable in the context of the Sakas in India. The history of the Indianisation of the Sakas is, however, very interesting. Patanjali in his Mahabhasya raises the question of the social status of the Sakas and points out that they were Sudras and not untouchables and need not be expelled from the dish. It can well be inferred from this that the Sakas had not got an honourable position in the Indian society till the times of Patanjali,[3] as they had in the later days. The position of the Sudras in the Indian society, as we know, was unenviable and they were despised by and prohibited to dine with the high castes. When, however, we find that the Manava Dharma Sutra[4] looks upon the Sakas as degraded Ksatriyas we may think that they had begun to be regarded favourably by a section of the Indian society, and the ball thus set on in rolling stopped only when these aliens acquired an admiral position in the land of their adoption.

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1. PHAI pp. 424-25 (6th ed.)
2. Cunningham, Later Indo-Scythians, 1962, Benaras, p. 25.
3. Earlier Dharmasutra writers like Apastamba, Bodhayana and Gautama permitted inter-caste dining (ADS 11.3.4; BDS 11.3.14; GDS ch. xvii), but the attitude soon changed and we find Angiras prohibiting dining with a Sudra (verses 55, 57).
4. x. 43-44.

In the Girnar record Rudradaman is described as "rajalaksmi dharana - gunatassarva - varnairabhigamya raksanartha patitvevrta " which may indicate that he was considered to have the qualifications of a Ksatriya. The names of these alien Kings of India are no doubt Scythian or Parthian in character; but many persons of lesser rank were adopting Indian names as early as the first century B.C. as is demonstrated by archaeological evidence. White-head[1] rightly observes in this connection that the names Vijayamitra and Indramitra are Indian, while Sasan is Iranian; the line could not have been Hindu by race. These Saka military chiefs had adopted high-sounding Indian names; they had become Hinduised and claimed to be Ksatriyas.

The process of assimilation of the Sakas into the Indian society seems to have been accelerated by their marriages in the four-fold caste system of the land. The Saka King Nahapana of western India probably had an Indian wife and his daughter Daksamitra was thus given an Indian name. From the Girnar epigraph of Rudradaman we learn that Satakarni, the lord of Daksinapatha, was related to him, while from the evidence of a Kanheri inscription, we may infer further that this Satakarni was a son-in-law of Rudradaman. Gautamiputra is stated to have stopped the admixture of castes and restored the 'Brahmanya dharma' and

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1. Numismatic Chronicle 1944, pp. 99-104.

yet one of his near relatives married a Saka girl.[1] From the evidence of the Nagarjunikonda inscription, we get another instance of 'Saka-Indian marriage. The Ikshaku king Virapurusadatta had as his queen the Mahadevi Rudrabhattarika who is described as Ujjanika-mahara-balika.[2]

It will thus be observed that the Brahmana Satavahanas were entering freely into marriages with the descendants of Castana.[3] According to the Dharmasastras marriage in the Indian society was looked upon as a sacrament and it ought to take place within one's caste. Free marriages between the Sakas of Ujjaini and the Satavahana Brahmanas could not have been possible unless the former had acquired a status acceptable to the rigid Indian society. It may, therefore, follow that the Sakas of Ujjaini were looked upon as Indian Brahmanas.

From the above discussions it may be clear that the Sakas in India secured for themselves an honourable position in the society of the land and became an integral part of the mainstream of Indian life, losing their separate racial entity in course of time.

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1. Nasik Inscription No. 2.
2. EI xx.4. According to D.C. Sircar, it is not altogether improbable that the Ikshaku queen was related to either Rudrasena I (A.D. 200-13) or Rudrasena II (A.D. 254-74). (The Successors of Satavahanas, p. 23).
3. Buehler, Laws of Manu, 73-79; Yaj 1. 56-57.

In the matter of religion as we will see the Sakas had either gradually adopted the religions of India or they were very tolerant in their religious approach. If the epigraphic evidences are to be believed, the northern satraps of Mathura, Taxila and Manikiala were staunch followers of the Buddhist faith. Of the Sakas of western India, Rsabhadatta, son-in-law of Nahapanas, favoured both Buddhism and Brahmanism, whom we find making Tirtha-Yatras to the Brahmanical sacred places, on the one hand, and making donations to the Buddhist monks, on the other.[1] The Kanakhera stone inscription of Sridharavarman shows that the Sakas, like their brethren Kusanas, also worshipped Mahasena or Kartikeya.[2]

The Bhagavata religion which captured foreigners like the Greek Heliodorus and others did not find much favour with the Sakas of India.[3] Similarly we have hardly any earlier archaeological evidence that would directly connect the Sakas with Jainism.

Though the Scythe-Kusana age is credited with the spread of Magism solar cult in north and west India, none of the earlier kings of the Sakas of Taxila, surprisingly enough,

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1. Nasik Inscriptions, Nos. 10, 12, 14; Kanheri Inscriptions, Luders No. 1099.
2. Chattopadhaya, S., Sakas in India, p. 94.
3. H.C. Raychaudhuri observes that the Saka and Kusana sovereigns of northern India were generally hostile towards the religion of Vasudeva (Early History of the Vaisnava Sect, p.4).

betray any signs of their being adherents of the cult. On the contrary, however, we find that the gods of Greek and Indian origin are represented on their coins. Siva on the coins of Maues, Abhisecka-Laksmi on those of Azilises and the Mathura satraps, Uma on Azes' coins etc., are all Indian gods or goddesses represented on the coins of the Scythians.[1] But none of these coins represent the figures or symbols connected with the solar or Magian cult.

This should not, however, lead us to believe that they had left their ancestral religion and adopted the religion of their subjects. But we must bear this in mind that they were the foreign rulers over another's land. It is the primary policy of the conquerors to show consideration towards the conquered subjects and avoid as far as possible interference in their internal matters in the beginning. Such a policy of appeasement and non-interference must have been followed by the Sakas in order to win over their conquered peoples. Similar treatment seems to have been meted out to the Sakas themselves by the Imperial Guptas after the conquest of Gujarat and Kathiawad. The Guptas, in the beginning, let their coinage flourish in the same technique, fabric and weight except some minor changes in regard to the name of the king on the obverse and the

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1. Lohuizen- de Leeuw, J.E., The Scythian Period, pp. 97-98.

representation of the deity on the reverse etc.

India, however, owes a lot to the Sakas for infusing many foreign elements into their culture, thereby enriching it to a great extent. They boosted the Indian / economy by opening new routes to Indian traders, merchants and caravans. In the field of administration, the satrap or the Indian counterpart Kshatrapa form of government was evolved in India by the Scythians on the pattern of the Iranian government. The imperial titles held by the Scythians and Kusanas show the admixture of Persian, Chinese and Roman idea of Kingship. The title 'Rajatiraja'[1], supreme king over passing other kings, as Rapson points out is 'distinctively Persian' Devaputra, son of Heaven (Tien-tse; Tien-tsu), is apparently of Chinese origin and Kaisar (Caesar)is Roman.

They introduced new type of wells in the land[2] as indicated by the expression 'Sakandha' which means the type of wells sunk by the Sakas.

Polygamy, which was a recognised Indian custom, was[3] also allowed in the Saka society. If Herodotus is to be believed polygamy also prevailed amongst the Scythians of Central Asia. Polygamy under the Scythian influence came

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1. PHAI pp. 512-13.
2. Katyayana i.1.64. cf Asta iv.1.151; Kasika, iv.1.151.
3. Herodotus (Eng. trans. Rawlinson) iv.78.

to receive added importance in the Indian society of the age.

The system of cousin-marriage in south India was possibly introduced by the Saka-Brahmanas.[1] The custom of burning the wife along with the remains of a departed chief was quite common among them,[2] which helped to spread the custom of Sati among the Indians.

The classical literature of India, particularly the Sanskrit drama, also saw its development, possibly under the Saka Kings of Ujjaini.[3]

KUSHAN AGE: The age of the Scythe-Kusana supremacy is the golden period for the development of the Magian solar cult in India. As already pointed out the Magian solar cult or Mithraism penetrated into India possibly during the period of the Achaemenids. The historians of Alexander testify the prevalence of the cult at the time of Alexander's invasion. During the time of Indo-Greeks we find a number of Magian solar symbols represented on their coins. For instance, on a coin of Philoxenes we find: "Sun-god, facing, radiate, clad in chiton, and boots; holds in left hand long sceptre; right hand extended".[4] A somewhat similar figure is represented on the coins of Telephus who ruled in the Kapisa region.

Mithra cult enters a new phase of development with the dawn of the Scythe-Kusana age. The Scythians, as already

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1. See Chattopadhyaya, S., Achaemenids in India, ch. iv; cf EHI i. 1.2, 1-3; SBE vol xiv. 146; EI vii. 28.
2. Altekar, A.S., The Position of Women in Hindu Civilisation, p. 147.
3. Levi, S., Journal Asiatique, 1902, pp. 96-125; Le Theatre indien, p. 361.
4. EHI

pointed out, introduced many new elements representing the Iranian culture which virtually gave a new lease of life to the cult. But the Kusanas too played no less an important role in the development of the Magian solar cult on the soil of India. The Kusanas also freely imbibed the culture of their conquered subjects, and imported into the land of their conquest and adoption some interesting features of its composite civilisation. The Kusanas absorbed appreciable quantity of Scythian traits[1] in their culture during their long sojourn in Tokharistan for over a century before they entered India. Ludvig Bachhofer after a careful investigation of Kusana costumes and weapons from their coins concludes that the Sakas and the Kusanas wore the same dress and fought with the same weapons.[2]

Some archaeological evidences belonging to the Scytho-Kusana period throw a significant light on the development of the solar cult. Several Zoroastrian deities like Sharism, Luhrasp, Orlagno, Ouron, Oaninda (resembling Greek goddess Nike) and others can be recognised among the numerous reverse devices of Huviska's coins with the help of the descriptive legends by their side.[3] The coins of the Kusana kings bear the name and figure of Miiro or Mihira.[4] Kaniska was the first to

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1. It may be pointed out here that Scythian culture now was a composite one including the various elements from both the Iranian and Parthian cultures.
2. 'On Greeks and Sakas in India', Journal of the American Oriental Society, 61, 1941, pp. 247-50.
3. Comprehensive History of India, p. 245.
4. Whitehead, Catalogue of the Coins in the Punjab Museum, vol 1, PP. 188-89, 194-95, 198 etc.

display Mihira, the Indian counterpart of Iranian Mithra, on his coins.

An interesting group of sculptures in red sandstone of the second-third century A.D. has been found in Mathura and its environs. They have been variously identified by scholars, several of them undoubtedly represent the Sun god, while a few may typify Samba, son of Krsna, who is traditionally regarded as responsible for introducing this form of Sun-worship into India. It shows that Mathura was the main centre of cultural activity and a great stronghold of the Magian cult during the times of the Kusanas who were more active than their brethren in propagating Mithraism.

The Magian cult, no doubt, had profound influence in the earlier centuries of the Christian era in the region comprising north-western India extending in the east as far as Mathura, but the Vedic Saura cult continued to flourish there during the age. In the rest of India, the Vedic Saura cult still had its away though the Magian priests had moved to the extreme south as far as the Malaya ranges in the Pandyan kingdom.[1]

The prevalence of the indigenous sect of the Sauras, during the Scytho-Kusana age, is evident from the various

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1. Ptolemy refers to a Magian settlement in Mount Bettigo which is identical with the Tamil Podegai, Sanskrit Malaya, ranges in the Pandya kingdom in south India, ETSAI, p. 107.

archaeological finds discovered from different regions. The main distinctive feature of this sect is that the Sun-god is represented as sitting on a chariot drawn by four or seven horses along with Aruna as the charioteer and Usa and Pratyusa as attendants.

We have an interesting figure of the Sun-god on the coins of Plato (second century B.C.), a sub-king possibly belonging to the time of Maratides. On these coins the figure of Helios riding on a four-horsed chariot, as Banerjea[1] points out, may favourably compare with the figure of the Sun god at Bodhgaya. The Surya relief at Anant Gumpha on the Khandagiri group of caves[2], of the first century A.D., resembles in the treatment with the Surya relief from Bhaja of the pre-Christian period. On this relief Surya is depicted on the chariot with his female companions and drawn by horses.

Sculpture No. D 46 of the period of Kusana age in the collection of the Mathura Museum shows a corpulent figure of the two-armed Sun-god sitting on his haunches on a chariot drawn by four horses; a lotus bud is placed in each hand, and his shoulders are provided with small wings as in the case of the Sun-bird Garuda; the legs are inserted in the chariot, but the body is shown covered by garments.

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1. BMI p. 120.
2. Barua, B.M., Old Brahmi Inscriptions in the Udayagiri and Khandagiri Caves, p. 310.

J.N. Banerjea[1] draws our attention to an interesting specimen of a small figure of Surya in black slate found in one of the sites of Gandhara belonging to the Kusana age in which the god is shown seated at ease on a chariot drawn by four horses and wearing boots.

In these figures we find an amalgam of the alien solar cult with Indian one and that is how the Magian solar cult was being gradually fused with the indigenous one during the Scytho-Kusana period.

The influence of the solar cult can be seen on Vaisnavism. Apart from the story of Samba which indirectly shows the effect,[2] we have a statement in the Mahabharata that the Pancaratras, a sub-sect of the followers of Vasudeva-Krsna, derived their doctrine from the Sun himself. The figure of the Surya carved prominently on a pillar fragment is found from Lala Bhagat, a small village in Kanpur district, Uttar Pradesh, along with the cock on the same pillar and the epigraph Kumaravara in characters of the second century A.D.,[3] which brings the god Surya in close connection with Kartikeya-Skanda-Kumara. The association of Surya with Skanda can further be supplemented from the literary account of the Bhagavat Purana which though belongs to somewhat later date. It shows that the solar cult was exercising a great influence on other cults as well, during the Scytho-Kusana age.

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1. DHI p. 494.
2. Mbh xii. 340 ff.
3. ASIR 1928-30, pp. 132-33, pl. xxxi; For details see DHI i p. 404.

VARAHAMIHIRA'S AGE : Despite the patronage of the Imperial Guptas to orthodox Brahmanism, the Magian Sun cult made further headway and gathered round it votaries from wider area and spread its influence among the orthodox class, a process that started in the Scythe-Kusana age.

Various inscriptions, seals, copper-plate grants, and extant temples prove beyond any iota of doubt that the cult of solar worship was widely prevalent during our times and it was followed by kings and commoners alike. According to the Mandasor stone inscription of Kumara Gupta and Bandhu-varman[1], dated 473-74 A.D., a guild of silk weavers who had migrated from the Lata Visaya, or central or southern Gujarat to the city of Dasapura, built a temple of Sun.[2] The Indore copper-plate grant of Skanda Gupta dated 465-66 A.D. records how a Brahmana named Devavisnu granted a perpetual endowment to a temple of Sun at Indrapura. The Khoh copper-plate[3] of Maharaja Sarvanatha, dated 512-13 A.D. reveals how he granted a village named Asramaka on the north bank of the river Tamasa to a Sun temple.[4] The Maliya copper-plate of Maharaja Dharmavasena II refers to him as a devout follower of Sun.[5] The Doo-Barnark inscription of Jivita Gupta mentions the Bhojaka Brahmanas who was incharge of a Sun temple.

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1. CXX 111 p. 80.
2. Ibid. pp. 68 ff.
3. Ibid. pp. 128-30.
4. Ibid. pp. 164 ff.
5. Ibid. pp. 212 ff.

The sealings found at Rajghat in Benaras show the popularity of the Sun worship.

But it is very difficult to infer from the above description of the temples whether they belonged to Magian solar cult or Vedic Saura sect.[1] Since the idea of the temple building was popularised by the Magians, these temples, in all probabilities, may belong to the Magian cult, except where the Bhojaka Brahmana priest was incharge of the temple.

The stone relief of Surya, carved inside a Caitya window of the Bhumara Siva-temple ascribed/the 4th century / to A.D., depicts the god as wearing a tall cylindrical head-dress, dressed in a long coat with a scarf tied at the waist, with his legs covered in long boots of soft leather, holding two lotus-birds in his hands, and accompanied by two male figures clad almost in the same manner, the chariot and horses are absent here.[2] The Sun god here is depicted in a typical Scythic type after the figure of King Kaniska discovered from Mathura and is in general agreement with the description of Varahamihira, which evidently demonstrates strong Magian influence.[3]

A few sealings found from Basarh and Bhita in the eastern India belonging to the Gupta period disclose

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1. Sudhakar Chattopadhyaya regards these temples as belonging to the Magian solar cult, EHSAI pp. 166 ff.
2. Classical Age, p. 438. Banerji, R.D., The Age of the Imperial Guptas, p. 186.
3. cf Encyclopaedia Brittanica, vol xx, p. 226.

very interesting study of the Magian cult. The seal found by Marshall at Bhita bearing the device of a fire-altar contains the legend Adityasya. Similar devices are represented on the Basarh seals Nos. 607 and 9 with a little variation in the legend Bhagawatah Adityasya and Ravidasa (h) respectively. The association of the fire-altar with the solar cult can be better understood in the context of Mithraism and Zoroastrianism and hence again the Iranian influences[1] and further be connected with Scythic tribes of Murundas who were ruling in eastern India on the banks of the Ganges in the period just preceding the Guptas.

Thus, the epigraphic records and sculptural remains show that the Magian sun cult which was prevalent in the north western India in the Scytho-Kusana age had extended into the Madhya Pradesh region and eastern India by the time of Varahamihira.

Side by side of the Magian solar cult, the Vedic solar sect too was flourishing during the age of the Guptas in the north as well as south India. Indigenous influence

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1. J.N. Banerjea points out that such fire-altars are found on the coins of the Panchala King Bhanumitra and also on the coins of early Kusana Kings Wema Kadphises and others - DHI pp. 188-89. See also Spooner, JRAS 1915, pp. 425 ff.

in the north is evidenced by the image of the Surya ascribed to the Gupta age, found at Khair Kaneh, and now preserved in the Kabul Museum, which shows the deity seated on a chariot while its horses are being driven by Aruna.[1] The sect of the exclusive Sun-worshippers of the south India, continued to flourish during the age independent of exotic impress, their cult being a natural out-growth of the general worship of Surya prevalent among most of the Indian people even from the prehistoric period. In the icons of south India, the Sun god is represented as bare-footed and the hands are lifted up to the level of the shoulders, or in some cases, the god is sitting on a chariot drawn by seven horses, and Usa and Pratyusa by his sides.[2] The famous Gudimallam Surya image belonging to the Gupta age, which agrees in treatment with the above description, may bear ample testimony to the prevalence of the Indian Saura cult in the south.

Bhojaka is another term denoting a sun-worshipper.[3]

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1. JISOA xvi.
2. EHI vol ii pt i pp. 311-12.
3. It is stated in the Bhavisya Purana (1.144.26) that the Bhojakas were born out of the union of the males of the Magas and females of the Bhoja tribe of western India. The account itself amplifies that the Bhojakas were born on the soil of India Since the Bhavisya Purana gives a composite picture of the two sects, the Bhojakas have been brought into relationship with the Magas.

Their qualities, duties, powers and privileges have been described in the Bhavisya Purana.[1] Vedic studies are a sine-qua-non for him. He believes in the Varnasrama concept of society and refuses to accept food from a Sudra.[2] A comparative study of the qualities of the Bhojakas and Magas goes to prove that the Bhojakas came to enjoy a better status and position in Indian society than the Magas,[3] which can be testified by the epigraphical evidences. The Deo-Barnark inscription states that from a very early period the 'Bhojaka' Brahmanas had been living at that place and the Magadhan King Baladityadeva granted the village to 'Bhojaka-Brahmana' Suryamitra for the purpose of the daily worship of the Sun-god. Later on the same village was granted to 'Bhojaka' Rsimitra by King Avantivarman.[4]

It is quite plausible to suggest from the above account that the Bhojakas were the indigenous orthodox Brahmanas of the Saura cult which may explain for their popularity among the masses vis-a-vis the Magas who were of a foreign origin as already shown earlier. The Bhojakas, however, gradually assimilated the exotic elements into the Vedic Saura cult.

The works of Varahamihira illustrate a complete fusion between the Magian solar cult and the Vedic Saura cult. By his times Mithraites absorbed much of the elements of indigenous Saura system by way of acknowledgement and belief

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1. Brahma Parvan ch. 117.
2. Ibid. 147.33,37-38.
3. Ibid. 141. 9a; 144.7a; 121, 36a.
4. CII iii p. 215. cf Bhavisya, Brahma Parvan, 144.26.

in the authenticity and superiority of the Vedas and Vedic literature. This is amply supplemented by the Bhavisya Purana, which gives the history of composite sects in such a natural accent that it is difficult to distinguish one sect from the other.

The points of resemblance between these systems are as under: In both of them the sun is said to have produced eight emanations from his body which came to be regarded as distinct divine beings, variously known as representing Bhojakas[1] as well as Magas.[2] The offerings made to the Sun god in India as well as in Iran were similar in nature.[3] Another point of similarity is the god 'Sraosa or Srausa with Sraosha (Avestan) a companion of Mithra.[4] Still another similarity may be sought in the god Mathara with Avestan Mathra.[5] There were other similar qualities and customs among the Maga Brahmanas and the Bhojakas.[6]

Despite many similarities, there seems to be some difference in the characters of the two gods. The stories of the birth of Sun god, related in Indian literature, seek

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1. Bhavisya i.117, 25 b, 26 a. In the art of Bamiyan, eight Buddhas are represented as Magas as shown by Godard. It was the result of Maga influence in Afghanistan.
2. cf. Bhavisya i. 47.70. Adibrahma 28.28-30,61.
3. cf Durant, W., op.cit., p. 372; Hmart, C., Ancient Persia and Iranian Civilisation, ed. 1927, p. 116; Gedan, A.S., Sun, Moon and Stars (Hindu), Encyclopaedia of Religion and Ethics, vol. xii. p. 84.
4. Hazra, R.C., op.cit., vol. i, p. 30; Zachner, R.C., op.cit., p. 96.
5. Bhavisya I.53.1.
6. Hazra, R.C., op.cit., p. 46.
7. For details see Davar, F.C., Iran through the Ages, pp.63-64.

his birth from an egg[1] whereas the Iranians have a different story of his birth according to which he emerges from a rock or a tree.[2] Whereas in Iran much emphasis was laid on the authoritative aspects of Mithra, in the Bhavisya Purana his creative function was stressed. In Iran, Mithra became the proto-type of an earthly deposit, but in the Bhavisya Purana, sun was a cosmic force, almost philosophical in concept. In Iran, the drift was towards a materialistic stand-point, in India, the trend was towards a philosophical approach.[3] This difference in outlook and emphasis may be ascribed to the growth of two types of thought complexes in these two countries.

The age of Varahamihira represents the Augustan age of solar cult, after the Vedic period, when both the exotic as well as the indigenous systems of the Sun-worship, despite their differences, were being amalgamated into each other and consequently Indianised to a great extent, culminating in rejuvenating the retarded Saura cult.

A large number of passages scattered here and there in many texts of Indian literature have exalted and extolled the qualities of the Sun to such an extent that he becomes the highest god.[4] For some time, it appears, Surya

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1. Bhavisya 1. 47.2a. cf Hopkins, E.W., Epic Mythology, ed. 1915, p. 87.
2. Stuart Jones, H., 'Mithraism', Encyclopaedia of Religion and Ethics, vol. viii, p. 757.
3. cf. Zaehner, R.C., op.cit., pp. 100-101.
4. cf Mark 78.1; Visnu, p. 193; Bhavisya 1.66. 50-54; Eliot, C., Hinduism and Buddhism, vol.ii 1957, pp. 136-37. Similar account of eulogies to Mithra has been brought forward by Herzfeld (Zoroaster and His World, vol ii, p.472).

formed with Brahma, Visnu and Siva, a kind of quadrumvirate, for in many ceremonial gifts these four go together. A lithic of their fusion finds a place in later sculpture, e.g. in the Chidambaram temple and the Limboji Mata temple at Dalmal (North Gujarat).[1] Chirahman finds on the nicolo seal device where an alien chief wearing one of the typical head-dresses attributed to Hepthalite Huna chief is shown standing in a suppliant attitude before the four-armed Brahmanical god - a combination of Visnu, Siva and Mihira in the deity.[2]

KONARAKA CLIMAX: The worship of the Sun god continued unabated during the period succeeding the times of Varahamihira, culminating in the building of the Sun temple at Konaraka in Orissa which is hailed as one of the wonders of Indian temple architecture. During all these years the Sun cult was a serious competitor of the Visnu and Siva cults. But it was gradually absorbed by these major sects. The Bhojakas or Magas themselves adopted Vaisnava or Saiva doctrines and the Sun became one of the important deity of Brahmanism. Even in modern India 'Gayatri Mantra', a prayer to God Sun, is recited daily by millions of Indian masses.

The prevalence of Sun worship in the post-Varahamihira period is evidenced from the literary as well as epigraphic records and extant temples. From the Harsacarita

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1. Classical Age, p. 439.
2. Comprehensive History of India, p. 246.

it is clear that Harsa's father was an ardent devotee of the Sun and he offered his daily prayer to the god "kneeling eastwards upon the ground in a circle smeared with saffron paste".[1] The epigraphic records refer to Prabhakaravardhana and his father and grand-father Adityavardhana and Rajyavardhana as Adityabhaktas.[2] The leanings of Harsa towards Sun worship are also evident from the account of Hiuen T'sang.[3]

The Hepthalite ruler Toramana's preference for solar worship is shown by his building a temple to the Sun in Multan, and, by naming his son Mihir-kul.[4] Hiuen T'sang describes the Sun temple of Mou-lo-Sam-Pu-Lu (modern Multan) thus:

> "Among the temples of other religions was a magnificent one to the Sun-god; the image was of gold[5] ornamented with precious substances; it had marvellous powers and its merits had extended far; there was a constant succession of females performing music, lights were kept burning all night, and incense and flowers were continually offered; the Kings and grandees of all India gave precious substances as religious offerings and erected free Rest-houses with food, drink, and medicine for the sick and needy. At this temple there were constantly 1000 pilgrims from various lands offering up prayers. All round the temple were tanks and flowers woods making a delightful resort".[6]

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1. HC p. 104. (Eng. trans. Cowell). J.N. Banmerjea thinks
2. that these members of the Vardhana house were followers of the Indo-Scythian cult (DHI p. 432). But it is very difficult to accept the view due to the paucity of evidences at our disposal to supplement or confirm the above account.
2. DHI, p. 432.
3. Watters p. 352.
4. Cunningham, Later Indo-Scythians, 1962, Benaras, pp.84-85.
5. Rayed head of the Sun god identified with the Sun god of Multan are depicted on the reverse of the coins of king Feroz of Iran (Cunningham, op.cit. pl.x.no.9, p.123; Thomas, E., Pahlavi Coins of Arabs, p. 92) and one Vasudeva, king of Bahman and Multan (Cunningham, op.cit. pl.x nos.10,11, pp. 124-25). It is suggested that this coin of Feroz may have been struck to commemorate his victory over Indian king, probably of Multan (Cunningham, op.cit. p. 100).
6. Watters ii, p. 254.

The popularity[1] of the Sun god of Multan is vouched for by Al-Beruni also. It is also stated in the Chach-Nama (History of Sind) that on the eastern side of Multan, there was a reservoir, in the middle of which[2] was a temple[3], which contained an idol made of red gold. Taranatha relates how in earlier times a king called Sri Harsa burnt alive near Multan 12,000 adherents of the Mlecchs sect with their books and thereby greatly weakened the religion of Iranians and Sakas for a century. This legend offers difficulties but it shows that Multan was regarded as a centre[4] of Magian cult.

The Gwalior Inscription of Mihirakula records the building of a temple of the Sun, by a person named Matreeta, on the mountain called Gopa, i.e. the hill on which the fortress Gwalior stands. Mihirakula also built a temple to the Sun known as Mihireswar[5] at Srinagari and large town called Mihirapura[6] in Kolada. The Nirmand copper-plate inscription records the name of Tripurantaka or Siva under Mihireswara which seems to indicate that Magian form of solar worship was combined with the Saiva cult.

It appears from the coins of both Toramana and his son Mihirakula (Mihiragula), the Epthalite rulers, that they were worshippers of the Magian sun cult. There is

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1. AI ii, pp. 148,154.
2. Cunningham, op.cit., p. 80.
3. Taranatha translation Schiefner, p. 128.
4. CII iii p. 162.
5. EI 1.206, p. 46.
6. CII iii, pp. 206-01.

a symbol of wheel on the coin of the former and on the reverse of another coin pertaining to the reign of the latter, there is the figure of a fire altar and an attendant.[1] The former is a symbol of the sun and the latter probably adopted from Sassanian coinage, the Zoroastrian fire worship.

In the age of Samkara, while in north India the alien and the indigenous solar sects were flourishing side by side; in south India, where the Indian sect mainly predominated, the cult was gradually coming under the influence of Tantricism. This is clear from Anand Giri's account of Samkara's meeting with the Saura leader Divakara.[2] The great philosopher was informed that there were six sub-sects of the Sauras using marks of red sandal paste, wearing garlands of red flowers and repeating the Mantra of eight syllables. Of these, the sixth class followed Tantric method and imprinted with a heated iron piece marks of the orb on the fore-head, arms and breasts. All these sub-sects followed, however, the Vedic precepts and at the same time chanted the eight syllable Mantra. They identified the Adityadeva with Rudra and Visnu and held that he was not only creator of this universe, but also its ultimate destroyer. Thus the Sauras held that Aditya (in view of the philosophical doctrine propounded by Samkara) was the Nimitta-Karanam of

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1. Rapson, Indian Coins, 1897, pl. 4, nos. 19,20; Cunningham, op.cit., pp. 85,97-98, and 108.
2. MKSAI pp. 172-73.

this world, a theory similar to the one maintained by the Pasupatas in case of Siva.

The provenance of the cult during the last phase of Hindu India is testified by many records. One of the tutelary deities of the Salankayanas of the Andhra country was the Sun (Citraratha), and at least one Valabhi ruler (the fifth one) was a follower of the Sun.[1] The Martanda temple of Srinagar in Kashmir built by Lalitaditya Muktapida[2] with its massive walls of stone within a lofty enclosure, balongs also to this age.

The sun temples are also found in many other parts, such as Gujarat, Gwalior and the district of Gaya, where an inscription has been discovered at Govindapur referrring to the legend of Samba. This same legend is also related in the Kapila Samhita, a guide-book for Orissa,[3] in connection with the great Sun temple of Konaraka. The Konaraka temple built in the thirteenth century dedicated to the Sun god is the best tribute given to the Saura deity in the shape of the spectacular monument in concrete. No existing temple can surpass the grandeur and enormous size of the Sun Dewl of Konaraka.

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1. Classical Age, p. 437.
2. RT iv. 192; vii. 709, 715, 722, 1096; viii. 3231,3292. See also JASB, 1942, pp. 258 ff; Fergussan, Indian Architecture, pp. 286 ff; Ain-i-Akbari, ii, p. 358.
3. See Mitra, R.L., Antiquities of Orissa, vol.ii, p. 146.

SECTION II

TIME OF VARAHAMIHIRA

The date of Varahamihira is controversial. Despite the sincere efforts of the historians to solve this crux problem, they have not been able to be unanimous on the same. The main difficulty on this point is the lack of any information, in the works of Varahamihira, about the year of his birth or any other definite reference which might fill this void. It is also unfortunate that none of his commentators have dwelt on this problem. Many hypotheses have been put forward by innumerable historians since the times of Sir William Jones, which may be examined by way of passing reference, before any final judgment is pronounced.

The first hypothesis is based on the Jyotirvidabharana,[1] which is said to have been composed by one Kalidasa, in the year 3068 (expired) of the Kali age[2] (= the year 24 of the Vikrama era or B.C. 33). According to this text Varahamihira is mentioned[3] as one of the nine gems of the court of king Vikramaditya, the founder of the Vikrama era in B.C. 58. It is also stated in the same text that Satya, Srutasena, Badarayana, Mantitha and Kumara Simha were the contemporaries of Varahamihira. The unhistorical character of the Jyotirvidabharana is very apparent in as much as

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1. Jyotirvidabharana xxi. 19-20.
2. Ibid. 21.
3. Ibid. 10.

Satya, Srutasena, Badarayana, Manittha and Kumarasimha are said to be the contemporaries of Varahamihira but Varahamihira mentions[1] Satya, Badarayana[2] and Manittha[3] as old authorities.[4] Diksit accepts the authenticity of the Jyotirvidabharana and concludes that the Kali 3068, the date of the composition of the Jyotirvidabharana would correspond to A.D. 428-29. This view, however, has been rejected by K.M.K. Sarma.[5]

The earliest epigraphical reference to the nine jewels of Vikramaditya, one of whom was Amaradeva, is mentioned in the Bodhgaya inscription[6] dated Samvat 1015 or 975 A.D.[7] Cunningham identifies Amaradeva with Amarasimha the author of Amarakosa, whose date has been fixed Circa 500 A.D.

The Jaina legend Kalakacarya Kathanaka[8] is another literary account which ascribes the Vikrama era commencing from 58 B.C. to Vikramaditya. It is a late and corrupt account which can hardly be relied upon for historical purposes. In this legend, the Saka King uses the title Sahanusahi which is apparently a Kusana title.

From the evidence of the coins we learn that Candra Gupta II took the title of Vikramaditya. Some scholars are

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1. BJ vii.3,10,13; xx.10; xxi.3; BY vii.1; Pat.53.
2. BS L.1.
3. BY x.21; BJ vii.1.
4. HIA pp. 197-99. cf Shah, U.P., JOI iv.no.1 Sept.1954,pp.69-84.
5. Poona Orientalist v.1940-41 pp. 205-9.
6. As Res vol.i. p. 286.
7. JASB vol. xxxii pp 7 ff.
8. Brown, W.N., The Story of Kalaka, texts, history, legend etc., 1933.

of the view that the original hero of the legends of Vikramaditya spread all over India is Candra Gupta II[1] and as the latter also lived in the Malava country, the era of the Malavas starting from 58 B.C. came to be associated with his name. Kern[2] identifies Vikramaditya with Bhoja who is said to have ruled from C.483 A.D. to C 538 A.D. in the Deccan. They other kings, who used the title Vikramaditya, are Kumara Gupta I, and Skandagupta belonging to the Gupta dynasty.

The Jyotirvidabharana is evidently a late forgery and pseudonymous[2] and the tradition recorded therein unreliable. In the present circumstances it is not possible to place Varahamihira as early as the first century before Christ for Varahamihira mentions Aryabhatta in the Panca Siddhantika, who was born in 476 A.D. and wrote his work in 499 A.D. Varahamihira was also aware of Vatsyayana's Kamasutra, Manu Samhita and Yajnavalkya Smrti, which are post Christian in time.

The second theory is based on the interpretation of Saka 427. While explaining the rules for calculating the Ahargana (i.e., sum total of civil days elapsed from an initial epoch to a given date[5]) the Panca Siddhantika[4] directs us first to deduct 427 from the number of the current Saka year for which the Aharagana is wanted, to indicate that the initial epoch of

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1. CCAI p. xxxi; Mukerji, R.K., A History of Indian Civilisation vol. I. p. 304.
2. Kern, Intro p. 20.
3. Ibid. pp. 16 ff.
4. PS 1. 8-10.
5. According to S.K. Dikshit (IC, vi 1939-40 pp. 171-210, 376-392) it should be read as 327.

the calculation is 427 Saka. Divergent views have been expressed as to the interpretation and identification of Saka 427. The first relevant point is to know the context in which Varahamihira used this era.[1] It is stated that Yudhistira ruled 2526 years before the commencement of the Saka era.[2] Taking 78 A.D. to be the epoch of Saka era, the date of Yudhistira will be 2448 B.C. which synchronises with the date of the battle of the Mahabharata but according to another tradition, the battle of Mahabharata is said to have taken place in 3102 B.C., the beginning of the Kaliyuga.[3]

N. Jagannatha Rao,[4] Gulshan Rai,[5] Kota Venkatachalam[6] and Thiruvenkatachar,[7] hold that Yudhistira died in the twenty-sixth year of the Kali age, that the Persian Emperor Cyrus the Great started a reckoning in B.C. 550, exactly 2526 years after Yudhistira's death (B.C. 3102 - (26 + 2526) = B.C. 550). Taking B.C. 550 to be the epoch year of Saka year, corresponding to that used by Varahamihira, it would follow that Varahamihira flourished in the second century B.C. which is again untenable. The same objections as applied to the first theory hold good in this case also.

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1. It is also called Sakendra Kala (B.S. viii.20); Sakabhupa Kala (BS viii.21) which is, however, confounded by Utpala with the Vikrama era.
2. BS XVII.3 ' Sad-dvika-panca-dviyutah' has been interpreted by V.G. Aiyar (Chronology of Ancient India p. 75) as 26 times 25 i.e. 650 years, while C.V. Vaidya (Mahabharata, A Criticism, p. 68) takes it to mean 2566. But Utpala interprets as meaning 2526 years which is also supported by Kalahana.
3. HI vi p. 7.
4. The Age of the Mahabharata War, Bezwada 1931.
5. The Persian Emperor Cyrus the Great and the Indian 'Saka' Era, Journal of the Punjab University His. soc. vol.1, 1932 pp. 61-73.
6. JAHRS xx 1949-50, pp. 30-80; xxi, 1950-52, pp.1-40.
7. JIH xxviii, 1950, pp. 103-10.

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Equally untenable is the view of C.V. Vaidya[1] and V.G. Aiyar[2] who hold that by Saka Kala Varahamihira means the era of Buddha's Nirvana commencing in B.C. 543. It is a mere conjecture based on the hypothesis of change of Saka Kala into Sakya Kala. Moreover, it is hardly consistent with the traditions recorded in ancient India that Saka Kala was either associated with the name of Cyrus or Buddha's Nirvana.

The Saka Kala under reference hence is used in the context of an era which was started in 78 A.D. and which can be put to test in relation to the date of the Mahabharata, as confirmed by P.V. Kane[3] who points out that 2526 years before Saka or 2448 B.C. was one of the three main epochs for the Mahabharata war. It is further testified and confirmed by the Nidhanpur plates[4] of Bhaskaravarman, the king of Kamarupa and the Rajatarangini[5]. Saka 427 hence noted above would correspond to 505 A.D.

It is quite possible that Saka 427 in one way or the other was very significant in the life of Varahamihira. It was the general practice among the astronomers to choose a year for their epoch to facilitate all astronomical calculations. Bhau Daji's[6] hypothesis is that Saka 427 is the epoch of the Romaka Siddhanta[7]. This view is more or less accepted by Thibaut who

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1. Mahabharata, A Criticism pp. 68-69.
2. Chronology of Ancient India, p. 73. cf Suryanarain Rao,B., Life of Varahamihira p. 6.
3. HD iii. pp. 898-900.
4. EI xii. pp. 65 ff.
5. i. 51.
6. JRAS (NS) vol. 1 pp. 240-41.
7. PS Intro. p. xxxviii.

further explains that Varahamihira borrowed the year of the Romaka as the epoch of his Karana. The theory does not hold ground and is lacking in plausibility. There are numerous instances of deviation from the above statement. Thus Brahmagupta composed his Siddhanta in Saka 550, whereas the epoch of his Karana Khandakhadhyaka is Saka 587. Likewise, Bhaskara wrote his Siddhanta Siromani in Saka 1072 (expired) but had Saka 1105 (expired) for the epoch of his Karana Kutuhula. It is also difficult to agree that Varahamihira should have chosen the date of the Romaka for the epoch of his Karana.

Dikshit[1] has shown that Saka 427 (expired) instead, is the epoch of the Surya Siddhanta, which is purely based on mere conjecture and hence it is difficult to accept the same.

Kern[2] is inclined to interpret Saka 427 as marking the year of the birth of Varahamihira. Pleading for his case Kern controverts the statement of Alberuni that Varahamihira composed[3] his work Panca Siddhantika in Saka 427. Referring to the original passage as translated by Schav, which runs thus " the year 400 of Yazdajird, taken as a gumge, corresponds to the year 526 of the era of the canon Panca Siddhantika". In this statement, Alberuni does not mention the date of the composition of the work but the era of the book. Let us accept for the time being that the Panca Siddhantika was composed 526 years before his (Alberuni's)[4] own time and that Varahamihira preceded his

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1. IA xix.1890 pp. 138 ff, cf Thibaut PS Intro. p. xxxvii.
2. Intro p. 2.
3. AI ii. p. 7.
4. Ibid. p. 7.

(Alberuni's) own time by 525[1] or about 526[2] years. These two statements taken together are inconsistent with each other. Elsewhere he says that Panca Siddhantika was composed 526 years before his own time. 'His own time' if it is interpreted as the time when he was writing, was 1030[3] A.D., but if it is taken as the time of his birth i.e., 973 A.D. or the composition of the book, the matter becomes complicated[4]. According to the second statement, Varahamihira precedes his own time by 525 or about 526 years, which is again difficult to explain. If both the statements are read together, it would follow that the date of the birth of Varahamihira and the date of the composition of the Panca Siddhantika was one and the same, which is very confusing. Hence it may be pointed out that it is wrong to infer from the statement of Alberuni that Varahamihira composed the Panca Siddhantika in 504 A.D. It may be twisted that the Saka 427 was not epoch for the Panca Siddhantika[5], but his astronomical epoch[6].

The date of Varahamihira as furnished by the astronomers of Ujjayini, is Saka 427[7]. According to Amaraja, commentator of Brahmagupta, Varahamihira died in Saka 509[8]. Corroborating these two statements it would have the period of

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1. AI i. p. 392.
2. Ibid. i. pp. 86, 277 (annotation).
3. Ibid. p. 277 (annotation).
4. Ibid. i. p. viii.
5. Swamikannu Pillai, L.C., Indian Ephemeris vol i pt.i appendix ii pp. 457-58, holds that 532 A.D. is the epoch of the PS.
6. cf HIA p. 212.
7. ME ii. p. 461. cf HA p. 149.
8. Pandey, R.B., Vikramaditya of Ujjain p. 68.

Varahamihira extending from Saka 427 to Saka 509.[1] Commenting on the unexplained chronological communication of Hunter,[2] Colebrooke[3] concluded that the dates assigned to various astronomers were correct. It can be further corroborated by the mention of an astrologer of this name in the Pancatantra, the Sanskrit original of the fables of Pilpay, translated in the reign of Noshirvan, Sassanian King of Persia (A.D. 531-579).[4] The statement that Varahamihira preceded 526 years from the time of Alberuni (i.e., 1030 A.D.) confirms the above view that Varahamihira was possibly born in 504-5 A.D.

V.M. Mirashi[5] throws some light on the genealogy of Maharajadhiraja Dravyavardhana who is mentioned by Varahamihira as a Saknna writer. According to him, Dravyavardhana who belonged to the Aulikara dynasty, was possibly the father of Yasodharman and ruled from 495 to 515 A.D.

It is difficult to agree with the theory of R.B. Pandey[6] who holds that Varahamihira cannot be placed in 5th-6th centuries A.D. because the territorial divisions of India as detailed in

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1. Same view are expressed in, Sarkar, B.K., the Positive Background of Hindu Sociology pp. 376-77; Mukerji, R.K., A History of Indian Civilisation p. 328; Renou, L., The Civilisation of Ancient India.
2. Varahamihira I, 200 A.D.; Varahamihira II, 505 A.D.; Brahmagupta , 628 A.D.; Mujala, 932 A.D.; Utpala, 968 A.D.; Bhoja Raja, 1042 A.D.; Bhaskara, 1150 A.D.; Kalyana Candra 1179 A.D.
3. ME pp. 461 ff.
4. Ibid. p. 432. cf Kern Intro. pp. 19-20.
5. Studies in Indology vol i Nagpur, 1960, pp. 206 ff. cf JBBRAS vols. xxiv-xxv. pp. 1 ff.
6. Vikramaditya of Ujjain p. 75.

the Brhat Samhita do not fit in with the territorial divisions known from the epigraphical records of the Gupta period. As it will be shown later, the geographical lore as represented by Varahamihira is fully in consistent with the time of Varahamihira in which he lived.[1] However, Sir W. Jones supposed, from astronomical date, Varahamihira to have lived about 499 A.D.[2] Colebrooke, for similar reasons, holds that, from two calculations one placing him at 360 A.D., and the other at 584 A.D., he may have been living at the mean date of the two, or about 472 A.D. and the third calculation dates him to 499 A.D. Colebrooke's personal view, however, was that Varahamihira flourished at the close of the fifth or beginning of the sixth century of the Christian era.[3]

The astronomical calculations from the fact that solstial points were in Makra 'Capricorn' and Kataka 'Cancer' during his time while they were at the asterisms Dhanistha and Aslesa would prove that the date of Varahamihira can be fixed in the first half of the sixth century A.D.[4] It may be pointed out that the astronomical data as contained in the various works of Varahamihira are not unanimous.[5]

Hence it may be concluded that the sixth century A.D. i.e., 505 to 587 is the most probable time of flourishing of Varahamihira which is amply supported by the contemporary life he depicted in his texts.

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1. HA p. 149.
2. ME ii pp. 481-82.
3. Ibid. p. 485.
4. BS chi. 1-2.
5. VH Intro pp. xxxi.

SECTION III

BRIEF HISTORY OF INDIAN JYOTISA

The history of the science of Astronomy i.e., Jyotisa Vidya in India goes to a hoary past. It came to occupy a very important place in the Vedic society, and gradually it attained the position of being one of the six Angas (auxiliary studies) of the Veda.[1] The Jyotisa Vedanga of the Rgveda and Yajurveda was concerned purely with astronomical matters.[2] Ganita and Jyotisa are used as synonyms. Jyotisa is hailed as the Aparavidya (inferior exoteric knowledge)[3] in the Mandukopanisad.

The history of Indian astronomy as evidenced from the works of Varahamihira, may be divided into three periods : pre-scientific, quasi-scientific and scientific.

The first period extends from C. 1500 B.C. to the beginning of the Christian era. The literature includes the Jyotisa Vedanga, astronomical Upangas of the Jainas; the Vrddha Garga Samhita,[4] the Suriyapannati,[5] the Manava Dharma Sutra,[6] and the texts of Brhaspati,[7] Atri,[8] Bhaguri,[9] Gautama,[10] Dvaipayana and Sulva[11] and the astronomical cosmological

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1. Asta Siksa verses 41-42. Jyotisa is said to be the eye of the Veda.
2. Vedanga Jyotisa of Yajuravedа verses 3,4; of Rgveda verses 35-36.
3. i.1.4-5.
4. BS xlii.2.
5. Ibid. xliii.30,51-55; liv.99-102; 110-11; lvi.31; YY x vi. 4.
6. Ibid. xxiv.1-3; lxxxvi.1.
7. Ibid. xlvi.1; BYY xxix.3.
8. Ibid. xlviii.2.
9. BYY xxix.3.
10. BYY i.15 ff; YY xvi.4.
11. YY viii.1.

sections of the Mahabharata and the Puranas. None of these works betray any trace of the exotic influence. The Jyotisa Vedanga describes the five-year Yuga, the positions of moon and sun at the solstices and at new and full-moon in the cycle of the Naksatras, or lunar mansions. In the astronomical cosmological texts we come across the doctrine of the four ages called Krta, Treta, Dvapara, and Kali, of which each preceding one surpasses in excellence that which follows.

The quasi-scientific period extends from the beginning of the Christian era to about 300 A.D. The most important treatises composed during the age are by Agista[1], Baladeva[2], Badarayana[3], Bhrgu[4], Brhadratha[5], Cyvana[6], Devala[7], Devasvamin[8], Garutman[9], Jivasarman[10], Kapisthala[11], Kasyapa or Kasyapa[12], Garga[13], Mandavya[14], Manitha[15], Maya[16], Nagnajit[17], Narada[18], Parasara[19],

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1. BS xi.1.
2. Ibid. liv.126.
3. Ibid. xi.1.
4. Ibid. lxxxvi.43; BYY vi.50; xxii.39.
5. Ibid. lxi. 1.
6. BYY xxix.3.
7. BS vii.15; xi.1; lxxxvi.1; YY i.15-16; ix.12.
8. Ibid. vii.7.
9. Ibid. lxxxvi.1.
10. BYY ix.1; BJ vii.9.
11. BS lxxxvi.1.
12. Ibid. v.2; xxi.2; xxiii.4; xxiv.2; xxvi.5; xlviii.65 xlix.1; lviii.29; xc.7; BYY xix. 1.
13. Ibid. i.5; ix.6; xi.1,5; xii.2; xxi.2,5; xxii.4; xxiv.2; xlvi.1,53-55,57-59,63,80; xlvii.2,38,51; L.15; lvi.31; lxv.8,9; lxxxvi.3,7,8-9; YY xi.15; BYY iv.6; vi.5-6.
14. Ibid. civ.3.
15. BJ vii.1.
16. BS xxiv.2; lvi.29; lvii.8; BJ vii.1.
17. Ibid. lviii.4,15.
18. BS xi.5; xxiv.2.
19. BS xi.5; xxiv.2.
20. Ibid. vii.8; xi.1; xvii.3; xxi.2; xxii.4; xxiv.2; lxi.1 etc.; Pat 17,23.

1 2 3 4 5 6
Asiputra, Sakra, Saptarsi, Satya, Sarasvata, Siddhasena,
7 8 9 10 11 12
Sukra or Usanasa, Vajra, Vasistha, Vijayanandin, Visnugupta,
13 14 15
Visvakarma, Yavana or Yavanacarya. The Paitamaha Siddhanta and the Vasistha Siddhanta are the other texts written during the time. Though these Siddhantas are drawn on the lines of the Jyotisa Vedanga, the exotic elements begin to appear and exercize influence. The Indian astronomy remained no longer purely Indian. The exotic elements exercised a great influence in remodelling the Indian Siddhantas by introducing the division of the ecliptic into the Zodiac system, the motions of the planets by the doctrine of epicycles; the notion of the parallax and its calculation, new methods of calculating eclipses; revision of the length of the year; the names of the planetary week-days; and table of sines in the Indian trignometry. But the methods enjoined in these two Siddhantas are so crude that they omit to distinguish between mean and true astronomical qualities.

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1. BS xlvi. 82-84.
2. Ibid. lxxxvi.1.
3. Ibid. 3.
4. BJ i.15; vii.3-4,9-11, 13; xii.2; xx.10 etc.; BYY xi.34.
5. BS liv. 99.
6. BJ vii.7; BS xxi.5.
7. BS L.22-24.
8. YY v.3; xii.23; xvii.1.
9. BS xxi.2.
10. Ibid. xxi.3-8; xxii.4; PS 1.3.; BYY viii.6; ix.2; xi.10-21.
11. PS xviii.62.
12. BJ vii.7.
13. BS lvi.29; lxxix.10.
14. ii. 14; iv.22; v.78,80; ix.21,35; x.6,15,18; xii.9; xiv.13 etc.
15. BJ ii.2; vii.1; viii.9, xi.1; xii.1; xxi.3; xxvi.19,21.

The scientific period of the Hindu astronomy starts from about the fourth century A.D. The Surya Siddhanta, the Paulisa Siddhanta and the Romaka Siddhanta are the significant astronomical schools which transformed the course of Indian astronomy and gave it a scientific reorientation. This period also witnessed some of the few renowned Indian astronomers viz., Aryabhatta[1], Bharadvaja[2], Dravyavardhana, Latadeva[3], Rsabha[4], Simhacarya[5], Varahamihira[6], Jisnu, Brahmagupta, Bhaskara etc.

The Surya Siddhanta is stated to have been revealed in the city of Romaka[7], possibly Rome or Alexandria. In it are introduced the Greek astronomical teachings for the first time side by side with the traditional conceptions. The earliest definite traces of foreign influence appear to have been found in the Romaka Siddhanta which endorses the length of the year exactly calculated in the same way as it was done by Hipparcus[8] (second century B.C.) and Ptolemy (second century A.D.) The Romaka Siddhanta, however, differs in other essential points from Greek astronomy and the Surya Siddhanta. These two Siddhantas must, therefore, go back to different sources.

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1. PS xv.20.
2. BS lxxxvi.2.
3. Ibid.
4. PS i.3; xv.18.
5. BS lxxxvi. 1-4.
6. PS xv. 19.
7. Macdonell op.cit. p. 183.
8. Ibid. pp. 183-84.

The literature written during the age can be divided into three distinct sections:

1. Ganita or mathematical astronomy.
2. Hora or the judicial astrology including nativity, horoscopes, weddings and nuptials and prognostications for journeys; and
3. Sakha or Samhita i.e. natural or mundane astrology.

GANITA: The Ganita, also called Tantra, deals with the determination of the motions of planets in the several signs of the zodiac by means of mathematical computation from various astronomical schools[1] viz., Paulisa, Romaka, Vasistha, Saura and Paitamaha dealing with Yuga, year, Ayana, Ritu, Masa, Paksa, day and night (Ahoratra) Yama, Muhurta, Nadi, Prana, Truti, etc. and the ecliptic.

HORA: It deals with topics[2] like the power or weakness belonging to the signs, half-signs[3], third-party, ninth-parts, twelfth-parts, and degrees; the determination of the power of the seven planets, which is various as depending upon the direction[4], the place occupied, the moment and the contention; the temperaments, bodily elements, substances, caste, and sphere of activity, etc., that belong to the department of earth planet[5]; conception, time of birth, prognostication of prodigious accessories, instant death of the child, duration of life, destiny and intervening changes of it, the most

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1. BS 11.4 p. 7
2. Ibid. 14.
3. cf BJ 1, 5-20; LJ 1, 8-20.
4. For an explanation of these terms see BJ, Digvala 11.19; Kalavala 11.21; Cestavala or Cestitavala 11.20.
5. cf BJ 11.8, 11-12.

favourable combinations of planetary positions as may exist in theory, the constellations under which kings are born, the lunar constellations, the constellations formed by only two planets, etc., the celestial constellations, etc., and the consequences of all these, descent and character, the planetary aspects, manner of death, state after death, state in a former birth; the good or bad symptoms at the moment of consultation,[1] the calculation of a lucky period for weddings and other ceremonies.

Hora is further divided into three sub-sections:[2]

i. Jataka or Janma i.e. nativity relating to the predictions from the situations of the zodiacal signs and planets at a person's birth. Jataka here is synonymous with Hora whereas at other times it is the general name for all kinds of horoscopy.

ii. Vivahapatala describing the effects of planetary combinations at the time of marriage.[3]

iii. Yatra or Yatrika dealing with the prognostics for journeys;[4] the relation to good or evil dates, week days, Karanas, hours (of 48 minutes), the horoscope, constellations, trembling of the body, dreams, the anointment for securing victory, the sacrifice to the planets, the offering to the goblins, the foretokens of the fire, the gestures of elephants and horses, the talk and spirit of the troops, the measures of policy in conformity with the forebodings of the planets, the auspicious and evil auguries, the ground for encampment, the colour of the fire, the use to be made, after circumstances, of ministers, spies, envoys, and savages and the expedients for taking the strongholds of the army.

SAMHITA:[5] The Sakha or Samhita deals with numerous circumstances,

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1. All these subjects form the argument of BJ from ch iii to xxv.
2. BJ xxxviii.1-3.
3. BS cii (full chapter).
4. BJ xxviii.4-6.
5. BS ii.17-18.

such as the fruits of the simple and retrograde movements of planets, their nature and extent of change if any, their magnitude, colour, rays, brilliancy, their form or figure, their setting and rising, their route, the nature of their motion on the way, configuration with a stone or planet and of their course among the stars and the like, their effects, the nine triads of stars (divided like a tortoise) and their effects in the countries, the Agastya Cara (the course of canopus), the time of its rise (which ushers the Sarat season when everything on earth assumes a lively appearance), the course of the seven seers (Great Bear), the division of things as belonging to the domain of each planet the same as appertaining to the domain of each asterism, the configuration of the five planets in the figure of a triangle, etc., the planetary war, the conjunction of the five planets with the moon, the effects produced by the planets on the years presided over by them, the symptoms of pregnancy of the clouds, the conjunction of the moon with Rohini, with Svati, with Asadha; the forebodings of instant rain, the conclusion to be drawn from the growth of flowers and plants as to the produce of trees and crops, the mock-sun, the halo, the cloudy line piercing the sun's disc at rising or setting, the wind, the meteors, the glow of the sky, the earthquake, the glowing red of twilight, the Fata Morgana, the dust-storm, the typhoon, the cheapness or the dearth of the products of the earth, the prognostics for the growth of corn, the banner of Indra, the rainbow, architecture, palmistry, the auspicious or unlucky movements of crows, the augural circle, the movements of wild beasts,

of horses, the circle of winds, the good or bad signs of temples, of statues, the treatment of trees, the observation of the soil for finding veins of water, the lustration, the sight of wagtails, the allaying the influence of portents, miscellaneous matters, the anointment of a king; the signs of sword; of diadem, of cocks, of tortoises, of cows, of goats, of horses, of elephants, of men, of women, reflections on womankind; the prognostics of bails, of shoes, of torn garments, of chowries, of umbrella-sticks, of couches and seats, the examination of jewels, the foretokens at a camp, the good or bad signs of tooth-sticks, etc., such as occur in common life to everybody as well as to kings.

Thus we see that Samhita sometimes includes a complete course of the science, and sometimes denotes only one of its three branches. In the first acceptation it is synonymous with the more appropriate term Jyotisa-Sangraha, although etymologically the one is as proper as the other. In the second acceptation it is synonymous with Phalagrantha and Sakha. In an attempt to clarify this ambiguity Kern points out that the whole knowledge of celestial phenomena, of measuring time, of omens and portents, of augury, in short natural astrology went under the name of Samhita, before each of the three branches attained its full development when in course of time the Hindus through the Greeks, became acquainted with two separate branches of the knowledge of the stars, (the only really scientific, the other quasi-scientific), they must have felt some difficulty in incorporating the mathematical

astronomy and the so-called judicial astrology into their Samhita. In keeping the distinct divisions, among which the second and third are different from each other not so much in matter as in method, they continued to feel, it is not unnatural to suppose, too well the etymological meaning of Samhita not to apply it occasionally to the whole course of the Jyotihsastra or Jyotisa-Sangraha.

FOREIGN INFLUENCE ON INDIAN JYOTISA: The resemblance of certain terms employed in astrology and astronomy have led some scholars to believe the close relationship between the Indian and foreign systems. There are many Sanskrit terms used in this literature translated or derived from the Greek sources. Hora, denoting astrological prediction by configuration of planets is considered to be a Grecian source.[1] Dreskana is also derived from some foreign source. It is called Decanni by European astrologers, evidently derived from Latin Decanus.[2] Its affinity with Egyptian or Chaldaic is not ruled out.[3]

Indian terms having similarity with those of the Greek are: Kala, Asma, Bhaga, and other synonyms of part; Kendra, Medhya, Anapha, Sunapha, Durudhara and Kemadruma, designating certain configurations of planets; Panaphara, Apokelima, Hibuka, Trikona, Jamitra, Mesvrana; the signs of the zodiac include Kriya, Tavuri, Jituma, Leya, Pathona, Juka, Kaurpya, Tauksika, Anokero, Hrdroga, and Itthya. Manittha has also been compared with Manetho, author of the Apotelesmata.[4]

One fact which emerges so clearly from the writings of Varahamihira is that he had a great regard for the Greek astronomy and astronomers. He refers to the Yavanacaryas in general and Yavanesvara in particular. Varahamihira is the

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1. ME 11 p. 526. of Keith, A.B., Sanskrit Literature, p.530.
2. Ibid. p. 364.
3. Ibid. 372.
4. Keith, A.B., op.cit. p. 531.

first Indian astronomer to give a detailed evaluation of the Rasi system. The omission of the Rasis from the earliest astronomical treatises, sometimes, leads us to believe that Varahamihira was the founder of the Rasi system in Indian Jyotih Sastra. But this particular hypothesis can easily be set aside in view of the discovery of the two earlier yavana astrological texts written by Minaraja and Sphujidhvaja.

The Indians as Colebrooke suggests adopted the division of the ecliptic and Zodiac systems from the Greeks. There is, however, ample evidence to the effect that the division of the twelve sodiacal signs into three portions each, with planets governing them, and portrayed figures representing them was prevalent among the Babylonians, Chaldaeans, Egyptians and Persians with whom especially the Persians[1], the Indians had regular contacts before the Greeks and whose influence on the Indian astronomy can hardly be ruled out.

The Grecian influence on Indian Jyotisa has to be reviewed and understood in the context of relation of the earliest civilisations of the world with the knowledge of this science. Astrology may be said to owe its origin to Euphrate-Tigris or Nile civilisation. The earliest civilisations of Sumer and Akkad which in course of time gave way to the Babylonians flourished on the sea-shore of the Persian Gulf. The Babylonians were the first among the middle-eastern kings who followed the policy of imperialism and empire building. The Euphrates-Tigris valley under the Babylonians reached the acme of civilisation

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1. cf MK ii p. 527; Keith, A.B., op.cit. p. 528; Macdonell, Sanskrit Literature, p. 130.

among the ancient nations. The Chaldeans or the Neo-Babylonians were the last independent kings to have ruled over Iraq, who were ultimately overpowered by the Persians under Cyrus the Great and the country was incorporated into the Persian empire.

The Babylonians were brought to build the capital of the Achaemenians, Persepolis. The Babylonian culture in course of time was amalgamated into that of Persian . The Persians also conquered Media and invaded Greece which brought them into regular contact with the Asians. The Medians were expert in astronomy and astrology. They are the same as Magi, or Magas as known in India. Hence their affinity with the Babylonians is a good probability. The Magi or Magas enjoyed respect and honour at the court of Iran.

The invasion of Alexander swept the whole of the known world bringing it closer. Another repercussion was the Hellenising of the conquered lands. The Greeks annihilated the existing civilizations but incorporated their significant progress within their culture. During these times also the Magas, as already stated, were pushed forward to the eastern borders of Persia and Afghanistan from where they entered India. Magas must have been benefitted by the knowledge of the Babylonians in the field of astrology and astronomy. The Greeks might have been likewise influenced by these amalgamated clans of Medians and Babylonians. So when we talk of Greek influence, we must not forget that the Greek ideas are ultimately to be reviewed from the point of view of these clans. We therefore,

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conclude with the remarks that it was the Magi clan or the Indian Magas who having absorbed the Babylonian elements, popularised the western (from India's point of view) astrology and astronomy in India and who were followed suit by the Greeks.

There are others who are for indigenous theory and believe in the development of Indian astronomy independent of alien influence. The most noteworthy being Bailey and Brennand who are of the opinion that the Grecian astronomy has nothing to do with its Indian counterpart, which was essentially different from and independent of that of the Grecian influence.[1] In support of his contention Brennand draws the following conclusions from the dis-similarities existing between their systems: " It may be truthfully asserted that nothing like the fixed ecliptic with its fixed concomitant arrangement of lunar asterisms is to be found in the Ptolemaic and later systems. Neither do we find in the latter anything like the method employed by the Hindus in estimating long periods of time, nor that of determining longitudes of the sun, moon, and planets from their position in a Naksatra. Even the process of calculations employed in regard to everything stated in Siddhantas, appears to exhibit a fundamental difference in the Hindu system, from processes employed in the science of the West. Again, it may be asked, where is there anything similar to Palabha or equinoctial shadow of the gnomon, used in that system, as an equivalent for the latitude of a place, and where is there

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1. HA p. 322.

anything like the formula entitled the Valana, in the projection of an eclipse? Further, is there anything with us corresponding to the Hindu radius, estimated in 3438 minutes of arc? These are unique, and go far to establish the contention that, whatever be the origin of the Hindu system, it certainly was not, in these and other particulars, copied from the Grecian or any European system."[1]

The Indian astronomical system too exercised a great deal of influence on other civilizations. The similarities between the Indian and Arabian astronomical systems,[2] in the several Naksatras or lunar mansions as divisions of zodiac is the result of the influence of Indian astronomy on Arabian astronomy. It is no small achievement that India developed her systems of astronomy in algebra and geometry, which, through Arab mathematicians, influenced the western world. The Indian astronomy had its originality on the subject of the precession of the equinoxes, which was accepted by the astronomers of the west and also excelled in the knowledge of the true doctrine of the uniform motion in the antecedentia and had also approximated to the true rate of that motion much nearer than Ptolemy, before the Arabian astronomers, and as near the truth as these have been done since.

Thus, whereas it may be difficult to accept the view that everything in Indian astronomy is foreign, it cannot

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1. Hindu Astronomy p. 322. See also ME 11 pp. 345-47.
2. For discussions see ME 11 pp. 321-73, 484-85.

be asserted at the same time that India remained unaffected by the wave of western thinking. Indian astronomy occupies a unique position in the astronomical systems of the world and any influence should sought as already pointed out not from Greece or any other country of the west but from the middle eastern ancient civilizations and possibly the Babylonians through their agents, the Magi or the Magas.

SECTION IV

WORKS OF VARAHAMIHIRA

Varahamihira is the only astronomer - astrologer in the whole galaxy of Indian Jyotih Sastra to have written on all its aspects comprising the Ganita, Hora and Sakha. In the Brhat Samhita he himself asserts to have compiled texts[1] relating to the above-mentioned sub-divisions.

The Ganita i.e. the pure astronomy is dealt with by Varahamihira under the heading Karana or Karana-Grahnam,[2] on the basis of which he is said to have composed the Pancha Siddhantika, evidently because the composition treated with the five Siddhantas, as we are informed by the commentator Utpala and Alberuni. This is the only work of Varahamihira of the Ganita sub-section which has come down to us. We further know from Utpala in his commentary on the Laghu Jataka[3] that Varahamihira compiled an abridged version of his Karana Grantha i.e. Pancha Siddhantika but unfortunately no trace of this work has been found so far. His work on the other two branches of the Jyotih Sastra exist in double form - copious as well as abridged. The Brhajjataka with its abridged version Laghu or Svalpa Jataka; the Brhad Yoga Yatra or Maha Yoga Yatra with its abridged forms the Yoga Yatra and the Tikaniku Yatra; and the Brhad Vivaha Patala with its counterpart

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1. BS cvii.14; BJ xxviii.6.
2. Ibid. i.10; v.18; xvii.1; xxiv.5; xvii.14; BJ xxviii.6; PS xviii.66.
3. LJ Comm.i.1. Varahamihiro ... Jytihsastra sangraham krtva tadeva vistaram granthabhirunam krte sainksiptam ganitasastram krtva horasastram vaktukamah.

Svalpa Vivaha Patala belong to the second sub-section i.e. Hora. Under the third branch of Jyotih Sastra i.e., the Skha, also known as Samhita, is his copious work in the Brhat Samhita also called Varahi Samhita. An abridged version of the same i.e., the Samasa Samhita, was prepared by Varahamihira. It is unfortunate that we do not find this work. However, a number of verses, possibly 144, have been quoted by Utpala in his commentary of the Brhat Samhita.[1]

Last of all we shall mention a number of minor works supposed to have been written by him. It is very difficult to confirm their authenticity. It is not unlikely that in course of time many topics such as the architecture, house-building and the temple architecture, ichnometry, horticulture, gem industry etc. which once formed a part of his encyclopaedic work Brhat Samhita, came to be studied and edited independently. To add more, another set of about a score of works mostly in manuscript form, are ascribed to him.

SAMITA LITERATURE

Panca Siddhantika: The Panca Siddhantika falls under the category of the so-called Karana literature dealing with the astronomical calculations i.e., " compendious astronomical treatises which do not set forth the theory of the subject at comparative length as the Siddhantas do, but merely supply a set of concise and often only approximately correct rules which suffice for the speedy performance of all the more important astronomical calculations. It is edited and

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1. See Appendix.
2. Thibaut Intro. p. vi. The contents of the PS are also mentioned in the BS 1.10.

translated by G. Thibaut and Sudhakar Dvivedi and published by Moti Lal Banarsi Dass, Lahore, in 1930, with an invaluable introduction provided by Thibaut.[1] The text is a compilation of five astronomical Siddhantas viz., the Surya, Paitamaha, Romaka, Paulisa and Vasistha, current during the time of Varahamihira. A short summary of these Siddhantas is given as under:

Surya Siddhanta:[2] According to the Surya Siddhanta, 1800[0] years contain 6[3]6[0]8[0] intercalary months, and 1[0]4[5]0[9]6[3] omitted lunar days. The number of 1[8]000 is the 24th part of the year of a Mahayuga. One revolution is performed in 3[2]31 d 23 h 42' 16.76"; while the duration resulting from the elements of the modern Surya Siddhanta amounts to 3[2]32 d 2 h 14' 53".4. The old Surya Siddhanta agreed likewise with Aryabhatta in reckoning 2[3]2226 revolutions of the moons's node to one Mahayuga while the modern Surya Siddhanta counts 232[2]28.[4] It estimates the greatest latitude of the moon at 2[7]0[5] minutes and assigns to the Sun's apogee the longitude of 8[6]0°. The chapters IX, X and XI deal with the doctrines of the Surya Siddhanta.

Paitamaha Siddhanta:[3] It is dealt with in the 12th chapter. According to this Siddhanta, the Yuga consists of five solar years

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1. For Bentley's view attributing all the five Siddhantas to Varahamihira, see AS Res vi.1806, pp. 537 ff; viii 1808, pp. 195 ff.
2. PS i. 14.
3. Ibid. 3.
4. Ibid. 5.
5. Ibid. 6.
6. Ibid. 7.

of 366 days each and contains sixty solar months, sixty-two synodical months, and sixty-seven ~~xxxxx~~ so called Naksatra months i.e., sidereal revolutions of the moon. The beginning of the Yuga is marked by a conjunction of the sun and the moon at the first point of the Naksatra Dhanistha. The duration of the longest day of the year amounts to eighteen Muhurtas, that of the shortest 10-12 Muhurtas; in the intervening periods the days increase or decrease by the same daily quantity.

Romaka Siddhanta[1]: Varahamihira gives a very short description of this Siddhanta, according to which the Yuga is called a lunisolar one, and said to comprise 2850 years, which period is further stated to contain 1050 Adhimasas and 25547 Pralayas i.e., Tithi Pralayas, omitted lunar days. According to the colophon, the chapter VIII deals with the calculations of the solar eclipses according to the Romaka Siddhanta.

The Romaka Siddhanta does not seem to be extant at present. However, a manuscript making the pretension of being the (or at least) Romaka Siddhanta, belongs to the India office Library in London which also, according to Kern, is purely astrological, not astronomical work, written in a hybrid Sanskrit which defies all description and does not deserve any.[2]

Paulisa Siddhanta[3]: The stanzas dealing with the Paulisa Siddhanta are so corrupt that it can not be explained with certainty.

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1. PS 1. 15.
2. Kern's Intro.
3. PS 1.11-13.

Vasistha Siddhanta: Similarly the Panca Siddhantika is not very exhaustive on the Vasistha Siddhanta. But it seems that the Vasistha Siddhanta was similar to that of the Paitamaha or the Brahma Siddhanta, which is purely drawn on the lines of the Jyotisa Vedanga and is devoid of any foreign influence. Whereas the Romaka and the Paulisa Siddhantas seem to be exotic in origin which landed into India with the introduction of the Greek astronomy following the invasion of Alexander, and with the passage of time came to be firmly established on the Indian soil so much so that during the time of Varahamihira they were considered as one of the five schools of astronomy of India.

The chapters I-XVII of the Panca Siddhantika deal with the general rules of the five Siddhantas and of retrograde and direct motions of the several planets from Mars onwards, their eclipse through proximity to the Sun, and their emergence after conjunction with the Sun, their state of being at war or planetary fight etc. The chapter XVI deals with the rules of the Surya Siddhanta for finding the mean places of the planets, according to the colophon. The chapter XVII treats with the calculation of their true places, probably according to the same Siddhanta. The chapter II is merely designated as Naksatradiccheda in the colophon. The chapter IV deals with the so-called Tripraznadhikara along with the rules of calculating the table of sines. The Chapter V is designated as Sasidarsanam and VI deals with the solar eclipses in accordance with the Paulisa Siddhanta as per the colophon. The chapters VII and VIII also relate to the solar eclipses. The chapter

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XIII designated in the colophon as Trailokyasamsthana deals with the popular exposition of the sphericity of the earth and the different aspects of the celestial sphere which are due to the difference of terrestrial latitude. The chapter XIV shows how certain results may be obtained not only by calculation but more directly by observation and chapter XV deals with some important astronomers. G. Thibaut holds that the chapters XIII,XIV and XV are the contribution of Varahamihira himself.[1]

The most crux problem in the context of the Panca Siddhantika is whether the Panca Siddhantika presents the teaching of the five astronomical works, on which it is profusely based, with absolute accuracy or rather allows itself certain modification of the doctrines summarised.[2]

A cursory survey of the Surya Siddhanta and the chapters dealing with the Surya Siddhanta in the Panca Siddhantika shows that both the texts agree in their fundamental features. Going deeper into the texts we find that the modern Surya Siddhanta teaches that a Mahayuga of 4320000 years comprises

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1. Intro. p. ix.
2. It is stated in the Bhasvati Carana that Varahamihira was the author of the Surya Siddhanta (As Res vol vi p. 572). It further reiterates that Satananda, the author of the Bhasvati, was his pupil under whose directions he compiled his treatise. But it is stated in the Bhasvati that Satananda composed the treatise in the Saka year 1021. (ME 11 p. 330). We can safely conclude that Varaha or Mihira in question cannot be connected with Varahamihira, the author of the BS . But it is possible that Satananda author of the Basvati, may have been a follower of the school of Varahamihira to which also Utpala belonged.

1593336 intercalary months and 25082252 omitted lunar days, whence it follows that the number of Savana days contained within the period amounts to 1577917828 whereas Varahamihira on the other hand following 'his' Surya Siddhanta (of the Pancha Siddhantika) states that a period of 18000 years comprises 66360 intercalary months and 1045095 omitted lunar days so that a Mahayuga (=24x18000 years) consists of 1577917800 Savana days, i.e., 28 days less according to the modern Surya Siddhanta. Similarly Varahamihira's Surya Siddhanta[1] assigns to the mean diameters of sun and moon the values 32' 5" and 30' 54" while 32' 3" 6 and 32' are the corresponding values according to the modern treatise. His rule for finding the year of the cycle of sixty years, founded on the mean motions of Jupiter, shows that he employed a different rule from that which the Surya Siddhanta furnishes, viz., 364,224, revolutions in a Yuga, instead of 364,200.[2]

From the above observations we can conclude that Varahamihira is not the author of the Surya Siddhanta and that the modern Surya Siddhanta is a corrupt text which has undergone many interpolations since the times of Varahamihira.

Regarding the other Siddhantas which we can check neither by means of the original nor with the assistance of modern recasts, it is quite possible that Varahamihira followed the elements and methods of the authors of the Siddhantas and permitted himself only minor changes, such as to facilitate

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1. PS ix. 15-16.
2. For details see MK ii. pp. 410, 434 and Thibaut Intro pp. xii-xviii.

calculations without affecting the fundamental character of the rules.[1]

The commentary of Utpala on the Brhat Samhita abounds in quotations from the Panca Siddhantika whereas Alberuni,[2] it seems, did not have had an access to this work.

HORA LITERATURE

Brhajjataka: Under the Hora branch of literature, Brhajjataka's importance is stupendous. Hora contains three sub-divisions, the first on nativity, named Jataka, the second on prognostics for journey under the title Yatra and the third concerning the weddings named Vivaha Patala. The Brhajjataka deals with all divisions of Hora which is rightly called Horasastra by the author himself. It is also known as Varahamihira Hora Sastra or Varaha Hora Sastra.[3] Being a text of indispensable nature, many commentators have vied with others to express their views from the time of its composition to the recent times. Out of the galaxy of the commentators Utpala alias Bhattotpala who also wrote a commentary on the Brhat Samhita undoubtedly is the gaint critic with valuable suggestions and critical notes. Balabhadra, who has been referred to by Alberuni,[4] seems to be an earlier commentator of

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1. Thibaut Intro p. xviii.
2. AI vol i. p. 158.
3. cf CSMGOML p. 94i.
4. AI i. 158.

the Brhajjataka who probably flourished sometime before Utpala, but his work is not available to us. The only commentary published so far among the mediaeval commentators is that of Utpala's known as Jagaccandrika or Cintamani and Vivrti. His judgment is rather very harsh for the nature of the text which is more expository than critical.[1] Utpala, by and large, has been successful in his job.

Other commentators worth noting are Govinda Somayaji[2] for his commentary known as the Dasadhyayi (because it deals only with the first ten chapters of the Brhajjataka and Rudra for his Vivaran which see an inner meaning which the author of the Dasadhyayi missed.[3] The Rudra's Vivaran is held superior to that of the Dasadhyayi.

Other commentaries are: Nilotpaliya,[4] known after the name of the commentator;[5] the Prakasa by Nityaprakasa Suri; the Hora Vivarana or Varahamihira Hora Tatparya Sagara[6] also known as Nanka; Subhodhini;[7] Jataka Vivarana by Mahidhara or Mahidasa.[8]

Last of all we may mention still another commentary written during the recent times known as Varahamihira Hora Sastram edited by A.N. Srinivasaraghava Aiyangar and published by the Adyar Library (1951). It deals with the first part of

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1. For other views see VH Intro p. xxv.
2. CSMCOMLM p. 9481 no. 14064. cf Prasnamarga 1.29-32.
3. There is also a Malayalam commentary in the form of conversation between a teacher and a pupil dealing with only important verses by Kanassa Panicker. This excels the commentaries of both the Dasadhyayi and Vivarana. cf HV Intro p. xxvii.
4. CSMCOMLM p. 646.
5. Ibid. (suppl.) p. 16.
6. TCSM iii pt i p. 4026 no. 2806; v pt i p. 6587 no. 4499; vi pt i pp. 4026 no. 2806; 7207 no. 5241.
7. Ibid. ii pt i skr-a, p. 1279 no. 970; CMSML p. 7675 no.11536.
8. NSM vii pp. 211-12 no. 2453.

the work covering the first ten chapters. The Brhajjataka was translated into Arabic by Alberuni himself.[1]

Laghujataka: It is an abridgment of the Brhajjataka. It is also known as Svalpa or Suksama Jataka. It consists of 14 chapters. Utpala wrote a commentary on the Laghujataka also. This two was translated into Arabic by Alberuni.[2] It has been edited and translated by Weber.[3]

Vivaha Patala: Brhad Vivaha Patala: Utpala in his commentary on the Brhajjataka (xx.10) refers to both the long and abridged versions of the Vivahapatala. Chapter clii of the Brhat Samhita is named Vindhyavasikrtam Vivahapatalam which comprises only 13 verses. It seems that Varahamihira gave the abridged version of Vindyavasin's Vivahapatala. A single manuscript is lying with V.R. Pandit of Bombay which has a commentary by Utpala. It is difficult to come to a particular conclusion whether the extant manuscript represented larger or abridged version.

YATRA LITERATURE

Brhad Yoga Yatra: The Brhad Yoga Yatra is the first of the series of the Yatra literature. It is also called Brhad Yatra or Maha Yatra and has gloss by Suryadeva Somant of Naidhruva

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1. It has been edited and translated by Weber, See Indische Studien, vol ii pp. 277 ff.
2. Vol i p. 158.
3. Indische Studien, vol ii pp. 277 ff.

gotra.[1] Utpala calls it by another unfamiliar name viz., Yaksye Svamedhika[2] or Yaksye Svamedhiya[3] Yatra, evidently after its second verse 'yaksye svamedhena vijitya', etc. The manuscripts of the Brhad Yoga Yatra are preserved in the Government Oriental Manuscript Library, Madras, and in the Library of the Bombay Branch of the Royal Asiatic Society.[5] A copy of the manuscript of the Brhad Yoga Yatra copied from a manuscript of the Panjab University, Lahore, is preserved with the Indian Institute of the Astronomical Studies, Gurdwara Road, New Delhi. It comprises 35 chapters.

Yoga Yatra:[6] It supplements the Brhad Yoga Yatra. According to Utpala it was written by Varahamihira because he regarded the Brhad Yoga Yatra as imperfect. It has a commentary by Utpala which is still in the manuscript form.[7] Kern possessed an incomplete manuscript of it with Utpala's commentary, containing only seven chapters. The entire work has been published by J.L. Shastri which has many mistakes.

Tikanika Yatra:[8] The Tikanika Yatra which has been referred to by Alberuni, comes also under the classification 'Yatra'. Three manuscripts of Tikanika Yatra have been found so far.[9]

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1. The concluding part of his gloss on Munjala's Laghumanasa states: tato varahamihira krta mahayatra samksepato vyakhyata, TCSM iii pt i p. 3916 no. 2741; iv pt i-a p. 4428 no. 3037.
2. Utpala p. 71.
3. Utpala YY Comm. i.l.
4. Author Index of Skr Mss in Govt. Oriental Mss Library, Madras, p.81.
5. CSPMSBRAS no. 388 p. 128.
6. Utpala YY i.l.
7. CPPMSBRAS no. 389, pp. 128-29; NSM i no. xlvii p.28.
8. AI vol i p. 158.
9. Cat. of Skr. and Palm-leaf manuscript in Nepal Durbar Library by H.P. Sastri page 26, Bundle no. 933 p; India Office Library, London Cat. of Skr. manuscript No. 6381-E fol.125-29, by Keith part I, vol ii, p. 818. One manuscript with the title Dhikanika Yatra of folios 3 bearing no. 413 of the Private Library of Rajaguru Pandit Hemaraja of Nepal.

It has been edited by V.R. Pandit in the journal of the Bombay University.[1] It is rather surprising that Utpala nowhere gives any indication of this work on 'Yatra' by Varahamihira, though he quotes this work several times in his commentary on Yoga Yatra.[2]

The Tikanika Yatra seems to be an abridged version of the Brhad Yoga Yatra. According to the text of V.R. Pandit, it comprises nine chapters, the last (Miscellaneous chapter IX) being the biggest with total number of 36 verses.

SAKHA OR SAMHITA LITERATURE

Brhat Samhita: Also known as Varahi Samhita, the Brhat Samhita is the most mature work of the author. The work deals with all the departments of astrology. The horizon of the scope of the work extends from 'botany to astronomy and from metallurgy to civil engineering[3] and hence it is rightly called an Encyclopaedia Indica[4] of the time which stands as a monument of scientic genius and enterprise.[5] It is a very important treatise written on the subject of natural astrology. The text has a unique character in Indian literature, for it deals with various aspects of human relations viz., psychology, medicine, physiology,

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1. Journal of the University of Bombay, September, 1951 vol. xx (N.S.) part 11 (Arts No. 26) pp. 40-63.
2. Ibid, 40.
3. Mukherji, Art and Culture, p. 180.
4. Sarkar, B.K., The Positive Background of Hindu Sociology (Bk.I) p. 276.
5. Mukherji op.cit., p. 180.

physiognomy, zoology, botany, philosophy and mythology and religion, fine arts, architecture, sculpture, painting and minor arts, music, dancing, geography, climatology, state, horticulture, farming, cattle breeding, commerce, banking and last of all astrology. It is landmark of Hindu scientific thought. In this monumental work which can rightly be called a Magnum Opus, there is no subject which Varahamihira has not treated of with dignity, beauty and grandeur.[1] It reads like a Mahakavya. The scope of the work is ample. It starts with the introduction reiterating the cause of astrology and goes on to describe the essentials of an astrologer in the second chapter. The next two chapters i.e., third and fourth concern with the effects of the movements of sun, of the changes of the moon, its conjunction with the planets and eclipses. Other planets viz., Rahu, Mars, Mercury, Jupiter, Venus, Saturn, Ketu are described in next seven chapters respectively. The twelfth chapter deals with the transit of Agastya (canopus) and describes the mythology of Sage Agastya's drinking of the ocean and the thirteenth chapter with the seven sages (Saptarsi). The fourteenth chapter which is called Kurma-Vibhaga is very interesting from the point of view of Indian geography. Countries people and things belonging to the domain of each asterism and planet come under the sway of the next two chapters respectively. The planetary movements that determine the wars

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1. Sastri BS Intro p. iii.

of the kings and the years presided over by each of the planets and their results are described in the Chapters Seventeenth and Nineteenth respectively. Then we are told about the formation of clouds (ch.21), rains (ch.23,28), earthquakes (ch.32), meteors (ch.33), halos (ch.34), rainbows (ch.35), an aerial city (ch. 36), mock suns (ch.37), Haze (ch.38), hurricane (ch. 39), crop forecasts (ch.40), as well as the fluctuation in their prices (ch. 42). Chapter 43 describes the popular festival of Indra's banner and is followed by a chapter 44 on lustration ceremony.

Then are described the three kinds of portents viz., celestial, atmospheric and terrestrial which foreshadow troubles as a consequence of wrongful actions committed by men (ch. 46). The royal bath prior to coronation forms the theme of the chapter 48 which is followed by the characteristics of royal crowns (ch. 49) and swords (ch.50). Further to this are mentioned prognostics from flowers and creepers (ch.29), wagtail (ch. 45), limbs (ch.51). Other chapters deal with the building of new houses (ch. 53), temples (ch.56), sculpture (ch. 58) and religious festivals such as installation of idols, search for underground water (ch. 54), laying out of gardens (ch.55) and cement (ch.57). Then comes the description of the specific characteristics of oxen (ch. 61), dogs (ch.62), cocks (ch.63), tortoises (ch.64), goats (ch. 65), horses (ch.66), elephants (ch.67), men (chs. 68,69), women (ch. 70), chowries (ch.72), and parasols (ch. 73). The praise of women (ch.74) followed

by the life of the harem (chs. 75,76,78) is similar to Vatsyayana's Kamasutra description. A chapter (76) on the preparation of perfumes is followed by the characteristics of couches and seats (ch. 79), gems (ch. 80), pearls (ch.81), rubies (ch. 82), emeralds (ch. 83), lamps (ch. 84), and tooth-sticks (ch. 85). Next eleven chapters (86-96) deal with augury (Sakuna). The chapters (100 and 103) are on marriage. The chapter (101) is a mere repetition of chapter (16) of Brhat Jataka which deals with the effects of 27 asterisms at the time of birth and the following chapter (102) divides the zodiac into signs (Rasi). The metres are described in 104th chapter and 105th chapter deals with the worship of the Stellar deity while 106th is the conclusion, followed by an index.

The Brhat Samhita is highly valued by Alberuni. Although a book on astrology, it contains important astronomical data, and its value for geography, architecture, sculpture, etc., is unequalled by any Sanskrit work as yet published. Varahamihira was regarded as an authority on architecture by Alberuni and on Ratnasastra on account of chs. 80-83 dealing with precious stones by Candesvara.[1] In Brhat Samhita, according to Keith,[2] he shows himself a master of the learning of his day in wide fields of knowledge and thoroughly skilled in language and metre, not at times with a real touch of poetic ability. In short it can rightly be called the epitome of the Gupta age.

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1. Ratna Dipika 1.3.
2. History of Sanskrit Literature p. 529. cf. The Positive Background of Hindu Sociology, Bk i, The Sacred Books of the Hindus vol xxxii pp. 366-67.

The text of the Brhat Samhita was edited by H. Kern (Cal. 1864). Sudhakar Dvivedi published it along with Utpala's commentary (Benares, 1895-97) in two volumes which has become very rare. It has been translated into English by H. Kern (only 84 chapters) in the Journal of Royal Asiatic Society (1870-75). Recently two more editions of the Brhat Samhita have been brought out one by V. Subrahmanya Sastri and M. Ramakrishna Bhat with English translation and the other by Achyutanand Jha with Hindi translation. Formerly in the 11th century A.D. it was rendered into Arabic by Alberuni.[1] An abridged and simplified version of Utpala's commentary on the Brhat Samhita, Utpala-Parimala written by Bhaskara, son of Kumara and grandson of Rama of Naidhruva Kasyapa Gotra and Varsaganya family, is preserved in a manuscript form.[2]

Samasa Samhita: It is the abridged edition of the Brhat Samhita. No manuscript of this work of Varahamihira has come to light so far. It is known only through the quotations of Utpala[3] referred to in his commentary on the Brhat Samhita. As many as 144 verses from the Samasa Samhita find mention in the commentary of Utpala on the Brhat Samhita. These verses are scattered all over his work which runs into two huge volumes and have been cited to highlight the relatively important matters discussed in the Brhat Samhita which served as a

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1. AI vol i p. 389; vol ii p. 277.
2. Cat. of Skr. and Prakrit manuscript in the Library of Indian Office, London, ii, pt.1 no. 6326, p. 785.
3. Given in the appendix.

reference book for the public at large. This, Utpala quotes one verse from the Sāmasa Samhita, on ch. iii of the Brhat Samhita on the movements of the Sun; seven verses on ch.iv on Moon; five verses on ch. v on Rāhu; five verses on ch. vii on Mercury; three verses on ch.viii on Jupiter; four verses on ch. ix on Venus; five verses on ch. xi on Ketu; three verses on ch. xii on Agastya; thirteen verses on ch. xiv on geographical divisions of India; eleven verses on ch. xvi on countries belonging to each planet; eight verses on ch. xix on years presided over by each of the planets; thirteen verses on ch.xx on planetary triangle; eight verses on ch. xxi on formation of clouds; one verse on ch. xxiii on rains; six verses on ch. xxiv on Moon's conjunction with Rohini; one verse on ch. xxvi on Moon's conjunction with Asadha; eight verses on ch. xxviii on signs of immediate rains; seven verses on ch. xxxii on earth-quakes; ten verses on ch. xxxiii on meteors; four verses on ch. xxxiv on halos; one verse on ch. xxxix on hurricane; two verses on ch. xlvi on portents; ten verses on ch. liii on architecture; and eight verses on ch. civ on metres.

A comparative study of the two texts leads us to believe that Utpala quoted the choicest verses of the Sāmasa Samhita, dealing with the most important topics of the Brhat Samhita such as astronomy, geography, agriculture, portents, architecture, metres etc., and as its name suggests it must have remained an abridged edition of the Brhat Samhita, its text being very faithful to the original text like other such texts of Varahamihira. It cannot, however, be said on authority that the Samasa Samhita contained in all 144 verses only. Though it

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can hardly be believed that Utpala could possibly have cited whole of the text of the Samasa Samhita in his commentary, it is all the more difficult to pronounce any final judgement on the question of extent of its contents in the absence of a copy its manuscript or any other reliable data throwing light on the number of verses contained in the Samasa Samhita. Notwithstanding all this, an effort has been made in this study to collect, sift and arrange whatever material is available in the form of an anthology given in 'Appendix' to this thesis.

MINOR WORKS

Vatakanika: It is a work on portents called Vatakanika.[1] The source of his information is the works of Bhallalasena. He cites about 120 verses from the Adbhutasagara. It may be suggested here that the eleven chapters LXXXVI-XCVII comprising about 320 verses of the Brhat Samhita dealing with the omens and portents formed an independent work known as Vatakanika. No manuscript of this work has been found so far.

Horapancahotrya: Alberuni ascribed the Horapancahotrya along with a book on architecture (title missing) to Varahamihira. Utpala, the commentator of Varahamihira does not include the above works in the list of the works of Varahamihira. The book on architecture seems to suggest that the chapters LIII, LVI, LVIII, LX of the Brhat Samhita dealing with the science of architecture might have formed an independent work. Alberuni

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1. cf All India Oriental Conference xxi Session, Summaries of Papers p. 47.

appears to have been in possession of such a work. This is not the lone example of its kind. There are other chapters of the Brhat Samhita also having been compiled separately forming independent works of Varahamihira. Many of them are recorded in the manuscript catalogues; Prasada Laksana (ch. LVI),[1] Citramayura[2] (ch. XLVII), Jalargala Sastra[3] or Drgargala[4] (the correct form is Dakargala or Dagargala ch. LIV).

It seems that the followers of Varahamihira school of astrology started compiling short books dealing with particular topics for the easy reach of the general intelligentsia. This movement probably commenced just after the times of Utpala for he hardly refers to such independent works in his commentary. They were in good demand and use during the eleventh century when Alberuni visited India and the list multiplied further with the lapse of time.

Brhajjyotisa or Brahmanotpatti-martanda[5] The Brhajjyotisa or Brahmanotpatti-martanda is yet another work ascribed to Varahamihira.

Sringara Tarangini Raghunatha Manohara (between A.D. 1675-1700) ascribes the Sringara Tarangini in his Kavi Kanthabha -

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1. Cat. of Skr. Mss. in Private Libraries of South India, p. 206, no. 2959.
2. Kielhorn, A Classified Alphabetical cat. of Skr. Mss. in the Central Provinces, p. 236 no.108; Hiralala catalogue of Skr. and Prakrit Mss in Central Provinces and Berar nos.1687,3884.
3. A classified cat. of Skr. printed works in Government Oriental Library, Mysore, 1922, p.74 no. B 478; Cat. of Skr.Mss. in Private Libs. of South India nos. 461,3146,3147.
4. CSPMEBRAS i p. 81 no. 248.
5. A classified cat. of Skr. and printed works in the Govt. Oriental Library, Mysore, 1922 no. C 188.

a work on poetics[1], to Varahamihira. It may be recalled that Varahamihira includes such topics on the poetics and erotics in his Brhat Samhita and devotes at least eight chapters on the above mentioned topics. A commentary on the Amarusataka, entitled Srngara Tarangini[2], by Suryadasa or Suryasuri is noticed by Aufrecht[3] and Diksit. It is difficult to come to a definite conclusion whether Raghunatha Manohara refers to astronomer Varahamihira or to another Varahamihira possibly a contemporary of king Bhoja Deva[4], and whether Varahamihira's Srngara Tarangini and Amarusataka's commentary are the same or not. But it is also a good probability that the portions dealing with the erotics and poetics in the Brhat Samhita might have been compiled separately by a follower of Varahamihira under the title Srngara Tarangini. But it is difficult to assign the work to Varahamihira in the present circumstances unless it is confirmed from a reliable source.

Jatakarnava[5] The Jatakarnava Sangraha (often written as) has been also ascribed to Varahamihira. It has been preserved in the manuscript form at the following places: The Nepal Durbar Library[6] has three chapters whereas the manuscript in the India Office Library, London, has seven chapters under another title

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1. Varahamihirasya Srngara Tarangini, fol.12 vide P.K. Gode, Studies in Indian Literary History, iii, p. 37 fn.1.
2. Catalogus catalogurum i p. 660.
3. HIA p. 272.
4. cf MK ii p. 483.
5. Sastri, H.P., Cat. of Palm-leaf and Skr. Mss. in Nepal Durbar Library.
6. Eggeling's cat. no. 3082.

Chayadhikara and elsewhere it is said to comprise 84 verses covering six folia.[1] Colebrooke,[2] however, doubts its authenticity.

Satapancasika: The booklet Satapancasika consists of seven chapters with 56 verses, as the title of the book implies. It is a very interesting small book written on the Prasna Sastra - one of the branches of Jyotih Sastra. All aspects pertaining to 'query' have been cleverly handled in this short work. This book is useful to both the seasoned as well as the talented youngbudding astrologers. It is written in the form of aphorisms and contains recondite ideas.

It is written by Prthuyasas,[3] son of Varahamihira. However, Alberuni[4] ascribed this book to Varahamihira which is not correct. The source of his information may have been some tempered manuscript. It was published in 1941 by V. Subrahmanya Sastri along with the Utpala's commentary and English translation.

Daivajna Vallabha: It is a treatise on divination. It ends with the same verse as Brhajjataka XXVIII.9, except for the substitution of 'Horam Varahamihira ruciram cakara' by

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1. NSM 2nd series, iv 1911 pp. 69-70.
2. ME ii p. 410.
3. The opening verse of the book confirms this view.
4. i.158; ii.277. Some of the Mss of the Satapancasika ascribe the book to Varahamihira himself. See Taylor, L., Cat. of Oriental Mss in the College Fort, St. George, p. 317; Karambelkar, V.M., Cat. of Sank. Mss in Nagpur Univ. Lib. No. 2235; Mitra, R.L., Cat. of Sank.Mss in the Lib. of the Maharaja of Bikaner, Calcutta, 1880 p. 337. Sometimes it is ascribed to Utpala, Karambelkar op.cit. nos.2326-29,2341; or Damodar Daivajna (Ibid. no. 2340). It is also referred to as Satapancasati (W. Taylor, Prasna Mahodadhi, ascribed to Prithuyasas wrongly described as Utpala's son (BMCOML nos. 12954,12957, 12959).

"Yatnad etam Varahamihiro racayamcakara"[1]. The opening stanza contains invocation to Isvara, who is described as 'Bhairava' and 'Advaita'.

The following works still existing in manuscripts only are also attributed to Varahamihira.

Panca Pakshi: It is a short treatise on divination by means of letters a,i,u,e and o with a commentary. It is written in Devanagri characters of about A.D. 1750. The text ends on folio 10 b. It concludes with the verse - Varahamihiraenoktam sadyah pratyayakarakam / Lagnamsa - kathinam jnatva samasena svasaktitah.[2]

Prasna Chudamani: A treatise on divination in 86 verses. It is probably a work of late origin (saka 1626) by one Candrasekhara.[3]

Prasna Mahodadhi: A treatise on Prasna Vidya with Sridhara's commentary. It breaks off in the 7th chapter, and extends from folio 27a to 37b.[4]

Prasna Candrika: It seems that Varahamihira actually composed a work on Prasna.[5] His authority on this subject is quoted in Nilakantha's Jyotisa Kaumudi and Narayana's Prasna Vaisnava.[6][7]

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1. CCMM iii p. 168 nos 1423; NSM iv 1878 pp. 206-7 no. 1633.
2. Cat. of Skr. and Prakrit Mss in the Lib. of India Office, ii pt i p. 843 no. 6436; Velankar, H.D., Cat. of Desai collection in the Bombay University Lib. nos.1468-70.
3. NSM i p. 229; iii p. 81.
4. TCSM ii no. 1288 pp. 1612-14.
5. Cat. of Skr. Mss in the Deccan College Lib., xiv.1881-82 fol.38; Cat. of Skr. & Prakrit Mss. in Central Provinces and Berar no. 2161.
6. Cat. of Skr. Mss in Desai collection of Bombay Univ.Lib. No. 1468.
7. CHMCML pp. 9420-21, no. 12976; Cat. of Skr.Mss in Bombay University Lib., No. 1483.

Anka Chudamani[1]: It consists of 225 slokas and covers 47 folia written in Bengali characters.

Mayuracitraka[2]: Two manuscripts of Mayuracitraka ascribed in the colophons to Varahamihira are preserved in the Bhandarkar Oriental Institute, Poona. One of them contains 322 verses in all in two chapters.[3] Varahamihira also deals with this subject in his Brhat Samhita[4] under the same title.

Tadaga Paddhati[5], Jatakabharana[6], Dasa Cintamani[7], Yogamava[8], Jyotisamava[9], Sutikadhyaya[10], and Puskaramyadi Paddhati[11] are among other works ascribed to Varahamihira.

It is difficult to ascribe these minor works to Varahamihira. It is quite possible that there were a number of astrologers happened to be living after the times of Varahamihira who might have compiled these texts and ascribed their works to the 'Great Astrologer' Varahamihira in order to pay homage to the enunciator of the science of astrology or to gain easy popularity and recognition for their works. But no satisfactory explanation can be given to these questions in the absence of reliable data.

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1. NSM (2nd series), iii pt 1 1904, p.1, Sanskrit No. 1572, New Catalogues Catalogorum, i p. 46b.
2. Deccan College collection of Mss 1884-87, no.838; 1919-24 no.55.
3. Ibid. 1929 -24, no. 55.
4. BS ch. xlvii.
5. Darbanga Mss No. 107.
6. Hiralal, cat. of Skt. and Prakrit Mss in Central Provinces and Berar, no. 1797.
7. Ibid. nos 2167-68.
8. Buhler, Report on a tour in search of Skt. Mss in Kashmir Rajputana and Central India, Bombay, 1877, No. 545.
9. Sambasiva Sastri, Cat. of Skt. Mss in H.H. Maharaja Palace Library, Trivandrum, iii. pp.1172-74.
10. Cat. of Skt. Mss at Jamm p. 176, nos. 836, 1058, 1182, 2940, 2964.
11. Darbhanga Mss no. 239.

PROSODY: Varahamihira employs at least 68 different metres, all of which are used in chapter CIV of the Brhat Samhita, dealing with the results of the various planetary positions in one's horoscope, couched in different metres, each stanza naming the metre it illustrates, but only thirty three in other works.[1] Arya is the most favourite metre used in 1731 verses in the Brhat Samhita alone. The other important metres used by him are Upajati or Indravajra in 282 verses in the Brhat Samhita and in 55 verses in the Brhajjataka; Anustubha or Vaktra, in 245 verses in the Brhat Samhita; Sardulavikridita in 42 verses in the Brhat Samhita and in 74 verses in the Brhajjataka; and Salini in 40 verses in the Brhat Samhita. Out of this long list Varahamihira uses 42 metres for less than ten times each.

The list of the metres used by Varahamihira may be enumerated as follows: Anavasita, na-ya-bha-ga-ga; Anustubha (Vaktra), bha-na-ma; Aparavaktra, na-na-ra-la-ga,na-ja-ja-ra; Arya; Aryagiti; Indravamsa, ta-ta-ja-ra; Upagiti; Upajati (Indravajra); Udgata, sa-ja-sa-la, na-sa-ja-ga, bha-na-ja-la-ga, sa-ja-sa-ja-ga; Aupacchandasika, 6, ra-ya,8,ra-ya; Kusumavicitra, na-ya-na-ya; Krtoddhata, na-sa-sa-ga; Giti; Tamarasa (Lalitapada), na-ja-ja-ya; Tunaka, ra-ja-ra-ja-ra; Totaka, sa-sa-sa-sa; Dandaka; Dodhaka, bha-bha-bha-ga-ga; Drutapada, na-bha-ja-ya;

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1. Stenzler has analysed and listed them in ZDMG 44 pp. 4-15; which has been reproduced with minor additions by K.D. Velankar, JBBRAS, xxiv-xxv, 1948, pp. 49-92.

Drutavilambita, na-bha-bha-ra; Dhiralalita, bha-ra-na-ra-na-ga; Narkutaka, na-ja-bha-ja-ja-la-ga; Puta, na-na-ma-ya; Puspitagra, na-na-ra-ya, na-ja-ja-ra-ga; Prthvi (Vilambitagati), ja-sa-ja-sa-ya-la-ga; Prabhavati (Laksmi), na-na-ra-ra; Pramanika (Sthira), ja-ra-la-ga; Pramitaksara, sa-ja-sa-sa; Praharsini, ma-na-ja-ra-ga; Bhadrika (Prasabha), na-na-ra-la-ga; Bhujangaprayata, ya-ya-ya-ya; Bhujangavijrmbhita, ma-ma-ta-na-na-ra-sa-la-ga; Bhramaravilasita, ma-bha-na-la-ga; Manjubhasini, sa-ja-sa-ja-ga; Manigunanikara, na-na-na-na-sa; Mattamayura, ma-ta-ya-sa-ga; Matta, ma-bha-sa-ga; Mandakranta, ma-bha,na-ta-ta-ga-ga; Malati, na-ja-ja-ra; Malabharini, sa-sa-ja-ga-ga, sa-bha-ra-ya; Malini, na-na-ma-ya-ya; Meghavitana (Vitana), sa-sa-sa-ga; Meghavisphurjita (Suvrtta), ya-ma-na-sa-ra-ra-ga; Motanaka, ta-ja-ja-la-ga; Rathoddhata, ta-na-ra-la-ga; Rukmavati, bha-ma-sa-ga; Rucira, ja-bha-sa-ja-ga; Lalita, bha-ra-na-ra-na-ga; Vaktra, bha-ma-ma; Vanisapatra-patita, bha-ra-na-bha-na-la-ga; Vanisastha, ja-ta-ja-ra; Vasantatilaka, ta-bha-ja-ja-ga-ga; Vatormi (Urmimala), ma-bha-ta-ga-ga; Vidyunmala, ma-ma-ga-ga; Vilasa; Vilasini, na-ja-bha-ja-bha-la-ga; Vaitaliya, 6 ra-la-ga, 8 ra-la-ga; Vaisvadevi, ma-ma-ya-ya; Sardulavikridita, ma-sa-ja-sa-ta-ga; Salini, ma-ta-ta-ga-ga; Sikharini, ya-ma-na-sa-bha-la-ga; Suddhavirat, ma-sa-ja-ga-ta-; Samanika (Samani), ra-ja-ga-la; Suvadana, ma-ra-bha-na-ya-bha-la-ga; Sragdhara, ma-ra-bha-na-ya-ya-ya; Svagata, ra-na-bha-ga-ga; Harinapluta, sa-sa-sa-la-ga, na-bha-bha-ra; and Harini (Vrsabha Crita), na-sa-ra-ra-sa-la-ga.

Varahamihira equates Narkutaka with Citaka to which Utpala adds that what is Narkutaka in Sanskrit Citaka is in

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Prakrit.[1] Similarly are equated Aryagiti (Sanskrit) and Skandhaka (Prakrit), Vaitaliya and Magadhi; Arya and Gatha.[2] Some of the peculiar features of some of the metres are that the number of groups (Ganas) of Matras is the same in both the halves of the Upagiti;[3] in Arya varieties there should not be a Jagana in the odd groups,[4] while the sixth group must have a Jagana or four short syllables; a short syllable occuring at the end of a foot should be treated as long;[5] and in a verse the fifth syllable in all the quarters and the seventh in the second and fourth must be short.[6] An analytical study of the prosodial practice of Sanskrit poets will show that[7] Varahamihira employed the maximum number of metres as compared with the early or mediaeval Sanskrit poets - Asvaghosa employed 20 metres; Kalidasa, 29; Buddhaghosa, 12; Bharavi, 24; Bhatta, 23; Magha, 41; Ksemendra, 16; Sriharsa, 19; etc.

Varahamihira, therefore, was not only a great astronomer and astrologer but a good grammarian as well, by virtue of which he could compose the subtle subject like astronomy in chaste Sanskrit, free from grammatical mistakes.

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1. BS civ.52 and comm.
2. Ibid. 54.
3. Ibid. 50.
4. Ibid. 51.
5. Ibid. 58.
6. Ibid. 57.
7. H.D. Velankar has attempted to analyse and ascertain the actual metrical practice of some 28 Mahakavis in Sanskrit Literature from the ancient and mediaeval periods (JBBRAS NS vols. 24-25 pp. 55 ff,).

LANGUAGE: It is very rare to have the dombination of poetry and science in a single author and rarer still is the excellence in both. But it is true of Varahamihira in whom we find a scientist and poet, each at its best. He is a master of the sanskrit versification, coupled with gemuine poetical fire. He excelled his fellow astronomers also when we speak of grammatical accuracy.

His poetical talent is manifested in his magnum opus, the Brhat Samhita, which is composed in a pure classical sanskrit. The dreary and dull subjects of astronomy and astrology have been represented in Brhat Samhita in such a lively and interesting manner that it reads like a Mahakavya. His language is faultless. He can be bracketed in this regard with any of the greatest classical poets.

The vast material of the natural astrology whose domain is extended to every pore of human knowledge, is very meticulously netted in an anthology of over 4000 verses. He followed the maxim of brevity which he repeats so often in his works. His famous Brhat Samhita which is an encyclopaedia of the sciences and arts, can be hailed as a monument of India's scientific genius and enterprise.

His description of the minute human emotions of tenderness, compassion and love as also that of behaviour of men and women in regard to their bodily passions, which is very appropriate, shows the depth of his knowledge of the psychology of human behaviour. He is equally efficient in the

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use of metaphors and similes[1], which bring home the excellence of his language.

GENERAL REMARKS: Varahamihira stands on the top in his own right for his contribution in the field of his study. He opened up a new vista in the development of the scientific temper in the field of his study which was hitherto strewn with traditions and mythologies and reorientated the Indian astronomical systems. He was a votary of science with fathomless craving for new researches, the results of which he recorded in his works. He had a band of reputed astronomers as his associates who assisted him in his unending researches uninterruptedly in the pursuit of extending the frontiers of human knowledge. With his high sense of team-work he rejuvenated confidence among his fellow scholars who took the challenge and pursued the knowledge with energy and faith.

Like a true scientist he was objective in his approach. He did not take anything for granted just because it had come down to us from tradition. As a scientist he put to test each and every thing he came across and held everything objectively and pronounced judgements in favour or against after sound observations with an open mind. He was bold, courageous and straightforward in his statements.

Varahamihira was a prodigious writer, a great scholar and an interpreter of his age. The encyclopaedic knowledge contained in his various works bears testimony to this effect.

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1. cf BS xxii. 6-11; xxiv.1,18,19,31,32 etc.

He was the first to dilate on the subjects of examination of jewels[1], signs of lamps[2], and toothsticks[3]. Utpala, who usually quotes freely from earlier writers, does not cite any verses on these subjects. A sizeable portion of what is called Upanga of the Samhita is thus an innovation of Varahamihira[4] and he may well lay a claim to originality in this respect. This should not, however, be construed to suggest that Varahamihira was a creative writer, because on the contrary we know on authority that on many aspects of Upangas he is definitely indebted to the earlier writers belonging to different complex of nations. And he himself makes no secret of it when he says, in all his humility, in unequivocal terms, in the beginning of the Brhat Samhita that the purpose of writing this book is to compile in a summary form the views lying scattered in the various Samhitas written by the ancient authors. It is very unfortunate that the older treatises on astrology prior to the time of Varahamihira have been almost entirely lost with an exception of Vrddha-Garga Samhita whose date of origin is very doubtful. It may be safely inferred that much of the Brhat Samhita is taken from ancient Samhitas.

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1. BS chs. lxxx-lxxxiii.
2. Ibid. lxxxiv.
3. Ibid. lxxxv.
4. The Samhita is divided into two portions (BS 11.6) viz., Anga and Upanga. The former deals with the planets, asterisms, and twelve signs of the zodiac whereas the latter is based on fauna, signs of men and women, slits of clothes and shoes, reflections on womankind, examination of jewels, signs of lamps, toothsticks, tiara, swords, chowries, umbrellas, couches, and seats etc. cf. Utpala.

But it goes without saying that he improved upon the Samhitas by bringing in much new material and leaving out account of certain legendary and unscientific topics and he bequeathed to his generations the accumulated knowledge of the forerunners which was otherwise lost for all practical purposes, in the shape of many quotations preserved in his various works. The greatness of Varahamihira, therefore, lies in his being a transmitter rather than an innovator.

Varahamihira is not an episode in astronomical lore of India but a living entity. He is very much alive in the works of the later astronomers and astrologers who drew inspiration from his life and works. He has been immortalised in the incarnation of the Sun who descended to this world in the Kali age in order [1] to save Jyotih Sastra from wholesale destruction.

Varahamihira not only influenced and inspired the later writers but his impact could also be clearly felt during his age. In his Siddhanta Siromani, Bhaskaracarya, the celebrated astronomer, admits of having benefited from his treatises. [2] Inspired by Varahamihira, Utpala wrote a work on astrology and another on architecture. The influence on him was so great that he regarded Varahamihira as his god-father and for that very reason he is sometimes taken to be his son.

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1. Utpala vol. i p.1 and Introductory portions on the BJ and YY. cf. TCSM iv. pt.i, Sanskrit-s, p. 4746, no.3199; CSSML p. 7672, no. 11523; CSMCOML p. 9481, no. 14064.
2. Siddhanta Siromani, i.2.

Kalyanavarman, the author of the Saravali, drew among others upon Varahamihira's works on horoscopy. Satananda (.A.D. 1098) based his Bhasvati Karana on the Panca Siddhantika of Varahamihira.[1] Sripati, Srinivasa-misratmaja, Srinivasacarya and Narayanadas, the authors of the Jyotisa Ratnamala,[2] Jyotisa-tattva-kaumudi,[3] Suddhi-dipika[4] and the Prasna-viplava[5] or Vaisnava Sastra respectively, also acknowledge their indebtedness to his writings.

Ganesa Daivajna is another writer (astronomer) who drew among others inspiration from him. No better tribute can perhaps be paid to Varahamihira for his knowledge of astronomy and astrology than the one found in the observation of Ganesa Daivajna who says that when astronomical and astrological rules framed by Parasara, Aryabhatta and others became inaccurate, they were amended, among others, by Varahamihira.[6]

Alberuni also evinced keen interest in the works of Varahamihira whose influence can be seen in his impressions about India. He is all admiration for him and speaks of him as

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1. Bhaswati Karana 1.1.4. cf. CEPMBBRAS 1. p.84, no. 252.
2. TCBM ii. pt. 1 Sanskrit-a, p. 2609.
3. Ibid. vi. pt.i p. 7208, no. 5241.
4. Ibid. iv. pt.i Sanskrit-a, p. 4357.
5. CSMCOML p. 9421, no. 13676.
6. ME ii. p. 476.

an honest astronomer[1] who clearly spoke out the truth.

It cannot be helped pointing out here that even Brahmagupta, who is passed for his severe censure of earlier writers, does not level any serious accusation against Varahamihira.

In short, Varahamihira had so many varied qualities of head and heart as are rarely found in a single individual which make him worthy of being credited with the incarnation of the Sun-god, the fruit of his agelong worship of the god and conscientiousness.

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1. AI. 1. pp. 366; 11.11012, 117, 277.

CHAPTER II

SOCIAL AND ECONOMIC INSTITUTIONS

SECTION I

CASTE SYSTEM

VARNA AND JATI : The terms Varna and Jati are used in regard to the social structure of society by Varahamihira which shows that both Varna and Jati theories were operating simultaneously during our period. The former is based on Guna and Karma[1] i.e., character, nature and quality (M. Williams) and the latter is based on birth.[2] The origin of the caste system or caste distinction is shrouded in obscurity, which can safely be pushed back to the tenth mandala of the Rgveda. Whether it was peculiar to the Aryan speaking people and it was they who introduced it in Indian society, is open to question. Its origin may be disputable but the development was slow and gradual and its ultimate aim was to bring the whole of India under one integrated pattern of social structure which curiously enough, was achieved to a great extent engulfing the

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1. BG iv.13; xviii.41.

2. According to the Dharmasutra writers the four-fold division was primarily based on birth. Mimamsaka Kumarila Bhatta holds that if Vrtti or action be the cause of determining one's Varna then "one and the same man would be a Brahmana when performing a good deed, and a Sudra when doing a bad one; and thus there would be no fixity of caste; similarly, when a man would be found to be performing an action that would give pain to a person as well as afford him relief (as in case of surgical operations), the person would come to be considered Sudra and Brahmana at one and the same time which is an absurdity." (Tantravartika, tr. G.N. Jha, p.10). While upholding the Jati theory, he concludes that caste is "signified by the cognition of the caste of parents". (Ibid.).

whole of India.[1]

Though in course of time the Indian society starts becoming rigid as a result of the incursions of the foreign people yet the door remained open for all the foreigners for their admittance into the four-fold system by following the Varna theory by which all the foreign elements which entered India following the time of Alexander's invasion had either been assimilated in Indian social structure or were in that process by the time of Varahamihira. The description of society by Varahamihira seems to be in accordance with the prescriptions enjoined in the Dharma Sastras.

CATURVARNA: Varahamihira and his contemporaries were aware of the Caturvarna conception of the society.[2] Popularity of the Varna Dharma is supplemented by the contemporary Indian writers[3] and foreign travellers.[3a] The traditional Varnas[4]

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1. Of the pre-Dharmasutra period, P.V. Kane (HD 11.1 p.48) comes to the following conclusions: (i) By the time of the Brahmana literature the upper castes i.e., the Brahmanas, Ksatriyas, and the Vaisyas had already been crystallised into groups more or less dependent on birth, while the Sudras, mainly the dasas and dasyus, had already been relegated to a lower position. (ii) Lower castes like Candalas had evolved long before the end of the Vedic period. (iii) Division of labour in the background of numerous arts and crafts led to the rise of sub-castes based on occupations even before the close of the Vedic age. (iv) There were already some non-Aryan tribes in the Vedic society and various aboriginal tribes were being admitted into the Aryan fold.
2. BS xii.19; iii.19,25; xxxiii.14; liii.12,14 etc. Liii.6. BJ ii.7.
3. cf Kalidasa, Raghu xviii.12; x.22; Amara ii.7-10.
3a. cf Legge p. 43; Watters, i p. 168.
4. BS iii. 19; xxxii.14; Li.5.

viz., Brahmana, Ksatriya, Vaisya and Sudra are denoted by the white, red, yellow and black colours respectively.[1] The precise and accurate observation regarding the four Varnas is very well represented by the Chinese traveller Hiuan Tsang,[2] who gives an apt account of the four traditional distinctions along with their rights and duties as attributed to them by the legal writers and also the mixed castes and numerous subcastes, which is similar to that of Varahamihira.

Hiuan Tsang, it will be noticed, takes the Sudras to be farmers whereas according to Manu[3] and others, the Vaisyas are farmers and the business of the Sudras is to serve the three castes above them. The Varnas are usually listed in the descending order[4] indicating the degree of status they enjoyed in the society.

Generally the members of the first three Varnas were collectively known as Dvija[5] and Dvijati[6] particularly the Brahmanas, who inherited this title by virtue of being born twice as a result of the privilege of initiation (Upanayana). The Sudras were devoid of this privilege.

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1. A few examples of principle of colour may be cited here: (i) White, red, yellow and black rays of the sun in the rainy season are said to destroy the four Varnas in order (BS 111.25). (ii) Raghu appearing white, red, yellow and dark was believed to afflict the Brahmanas, Ksat-riyas, Vaisyas and Sudras respectively (BS v.53,56,57,59; cf. Ibid. 111.19; x.21; xxx.17; xxxii.14; xxxv.4,8; xxxvi.1; lii.1). (iii) The Ksatriyas were to use red or yellow diamond; the Brahmanas, white; the Vaisyas, hued like Srisa flower; and the Sudras, black. (iv) The sites for the house of the persons belonging to different castes differed from one another in regard to colour, taste, smell and similar other matters (BS liii.89-95). (v) Similarly dwellings with various measurements are prescribed for different Varnas (BS liii.12,13,15, 18-19).
2. Watters i p.168.
3. i. 89.
4. Anuvarna BS 111.19; Varnakrama BS lxxi.4.
5. BS iv.23; v.20,32,76; ix.39; xi.18; xv.1,24; xviii.4; xix.13; xxiv.7; xxxii.14; lxxx.11; lxxxvi.3; etc.
6. YY iv.4.

During our period the caste system seems to be more rigid[1] in many of its aspects. Varahamihira[2] assigns different quarters of a city to the Brahmanas, Ksatriyas, Vaisyas and Sudras. The distinction is carried to the handles of clubs, umbrellas, goads, canes, bows, canopies, spears, banners and chowries allowable to the four Varnas respectively, being[3] of the colours, yellow, yellowish-red, honey colour and dark.

The principle of colour is also taken into consideration in regard to the selection of sites for residential buildings[4] or for temples. Similar[5] is the case with regard to the trees and in fashioning images. Before commencing the construction of a house the owner had to draw lines touching his head, breast, thighs and feet according[6] as he was a Brahmana, Ksatriya, Vaisya and Sudra. This reminds one of the Purusasukta of the Rgveda which postulates the origin of the four Varnas from

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1. The caste distinction is extended to certain astrological phenomena also. Thus an eclipse during northern or southern solstice was supposed to afflict the Brahmanas and Ksatriyas or the Vaisyas and Sudras (BS v.32). We are told that persons belonging to the four Varnas are afflicted when the Sun or the Moon is eclipsed in certain periods of the day (BS v.28,29). They were also supposed to be presided over by different asterisms and planets (BS xv.28-30; xvi.34). A halo appearing on the first four days of a month is said to bring ruin to the four Varnas in order (BS xxxiv.19). A meteor falling on its head, breast, side and tail or the one that is straight, glossy, unbroken and falling downwards is said to hurt the four Varnas severally (BS xxxii.14,15).
2. BS liii.70,91. cf Artha ii.4.
3. Ibid. chs lxxi and lxxii.
4. Ibid. liii. 94; lvi.9.
5. Ibid. lix. 5-6.
6. Ibid. liii.98.

the face, arms, thighs and feet of the Purusa. How far these distinctions were following in practice is not possible to ascertain for want of reliable data.

Varahamihira[1] holds that besides the four Varnas there are the Mlecchas also. He mentions the Mlecchas time and again as a separate unit along with the four-fold system. He illustrates[2] this further by adding that the Yavanas are the Mlecchas. He differentiates[3] the Mlecchas from the low castes and the Candalas[4] as well. According to Alberuni, all those who kill men and slaughter animals and eat the flesh of cows and all other men except the Candalas as far as they are not Hindus, are called Mlecchas. It is apparent from this statement that the Mlecchas denoted the foreigners viz., Yavanas (Greeks), Pahlavas(Parthians), Sakas (Scythians), Hunas etc.[5] Further they were placed in the western sector of India. It was a sort of stepping stone for the foreigners. First they were admitted to this fold and later upgraded. It was a silent movement with vital outcome. The Varna system played a very important role in making the Indian society a dynamic one.

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1. BS v.28-34,54,79; viii.53;ix. 13,35; xvi.11,35; xvii.14,16.
2. Ibid. ii.14.
3. Ibid. v.28-29.
4. ii p.137.
5. BS xiv.21.

LOW CASTES: The low-caste tribes referred to by Vârahamihira[1] are numerous. The Candalas along with other outcaste people[2] are assigned the corners of cities for dwelling purposes.[3] The Candalas were one of the six primary pratiloma castes originating from the union of a Sudra male and a Brahmana female,[4] according to the Dharmasastra writers. They used to eat dog's meat,[5] which is confirmed by other sources.[6] In the Mrcchakatika two Candalas are mentioned as hangmen. We find indirect references to the low-castes viz., the butchers, fishermen, public performers[7], executioners, and scavengers who, according to Hiuan Tsang, had their habitations marked by a distinguishing sign.

In the Madhyadesa, as we know it from Fa-Hien,[8] the Candalas were required to live outside the boundaries of towns and markets places, on approaching which they had to strike a piece of wood as a warning to others to avoid their touch.[9] Both Jain and Buddhist texts corresponds to the view

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1. BS xv.27; BJ 11.8.

2. Ibid. 30; YY.ix.17. Manu regards the Candalas as the lowest men and speaks of them as living outside the village, having dogs and donkeys for their wealth, dressing themselves with the clothes of the dead, taking food from broken dishes, having iron ornaments and wandering from place to place (x.16,51-56). cf Sachau I, p. 101.

3. Ibid. 1111.84.
4. Manu x.12; Yajna 1.93; Artha 111.7; Amara 11.10.14.
5. BS 1111.84.
6. Mrc act x; Mudra vii.
7. Watters i p. 147.
8. Giles p. 21; Legge p. 43. cf Takakusu (I-Tsing) p. 139.
9. BI p. 28.

that the Candalas and other low-caste tribes were despised by the public at large of the upper classes. The present untouchability, a blot on the Indian society, is the outcome of such behaviour meted out to the low-caste tribes in the earlier times.

MIXED CASTES:[1] The intermixture of castes was prevalent in the society of Varahamihira.[2] This fact is borne out by Hiuan Tsang[3] also. The Parasavas - sons of Brahmanas by Sudra women - are referred to by the author. The harmony of the mixed caste can be proved by an instance from Bana's life,[4] who had two half brothers of low-birth, Candasena and Matrsena, by a Sudra mother, among his good friends who lived with him under the same roof. We also learn from a Tipperah Copper plate inscription (A.D. 650) that Lokanatha's maternal grandfather Kesava, office-incharge of royal army, was a Parasava.[5] Vidura was also a Parasava and married to Parasavi daughter of King Devaka.[6]

The 'Svapacas' another Sankarajati,[7] are classed among the Antya-jatyas by Varahamihira[8] and are relegated to the corners of a city or village indicating that they had their

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1. Vivarna BS xxxvi.8; cf. Ibid. ix.14; lvii.15; LJ ii.6.
2. Watters i p. 168.
3. BS lvii.15. cf Amara ii.10.
4. HC p. 32.
5. EI xv.6. p. 305.
6. Mbh Adi. 108.25.
7. BS ii.5. cf Abhidhana Ratna Mala of Halayudha II, p. 599.
8. BJ ii.77.
9. BS lvii.82.

own settlements , probably away from the towns or villages. They are variously[1] called the offspring of a Ksatriya man and an Ugra woman[2], an Ugra man and a Ksatriya woman, a Candala male and a Brahmana female[3], and of a Candala male and Vaisya female. Sometimes they are identified with the Candalas[4].

The Nisadas[5] are the offspring of a Brahmana male and a Sudra or Vaisya female[6]. Manu assigns them fishing for their occupation[7]. Utpala identifies the Nisadas with the Naikrtikas[8]. Ugra is born of a Ksatriya male and Sudra female[9]. Manu requires an Ugra[10] to pursue the occupation of killing the animals living in holes[11]. Dombas are the present Doms working in the cremation grounds[12]. Sometimes the foreigners (Mlecchas) are also connected with the mixed castes[13]. According to the Smrtis various other castes were created by their Anuloma and Pratiloma marriages[14].

Special attention was paid to maintain the 'ceremonial purity' and check further degredation of the institution of Varna. The 'ceremonial purity', as observed by Hiuan Tsang, appears to have been the Hindu ideal of

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1. Manu x.19.
2. Artha iii.7 p.165.
3. HD ii p. 97.
4. Amara ii.10.19-20. cf Manu x.19.
5. BS v.76.
6. Manu x.8; Artha iii.7 p.164; Yaj i.91.
7. HD ii p. 86.
8. x.48. cf Utpala v.76.
9. BS v.28; x.3; xix.2(nikrti). cf Amara i.7.30, where nikrti means deceit. Amara (ii.10.19-20) identifies Nisadas with Candalas.
10. BS xv.29; xxxi.3; cf YY ix.6.
11. Manu x.9; Amara ii.10.2; Artha iii.7. p.164.
12. Ibid. 49.
13. BS lxxxvii.33.
14. Ibid. xvi. 11.
15. Anuloma means a marriage between the male of a higher and the female of a lower caste; and the Pratiloma is a marriage just in the reverse order. For details see Infra 'marriage' section.

maintaining the Varnasrama Dharma.[1] The life of the four Varnas was regulated by the Dharma Sastras and it was considered the duty of the King to protect and maintain the Varnasrama Dharma.[2] This fact is enjoined in the contemporary epigraphical records. In the undated Asirgadh copper seal inscription of Sarvavarman[3] it is recorded how Maharaja Harivarman was employing (his) sovereignty for regulating the different castes and stages of religious life. Prabhakara-Vardhana, father of Harsavardhana, was similarly credited with regulating all the castes and stages of religious life.[4] The poet Kalidasa confirms the view that the king was the protector of the Varnas (Varnasramanam raksita)[5] and to him was entrusted the responsibility of looking after the proper and righteous conduct of his people, for which he derived the epithet Sthiterabhetta,non-transgressor of the established order.[5a]

Except for some sporadic references to extreme views of rigidity the approach to the social problems during our times seems to be very flexible in its nature and dynamic in character. The reference to the Sankarajatis viz., the Candalas, Ugras, Nisadas etc., is very interesting. They have been mentioned as resulting from the hypogamous and hypergamous marriages. But a critical study of the above names would show that they are the titles of different tribes of un-Aryan origin.

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1. LGA p. 95.
2. Manu i. 91.
3. CII iii pp. 220-21.
4. Ibid. p. 232.
5. Raghu xvii.12; Sak act v.10 p. 67.
5a. Ibid. iii.27.

Their inclusion in the Brahmanical society points out that they were not only admitted into the Brahmanical society but had gained some status as well.[1] The Aryanisation of India was still continuing during our times and every effort was being made to bring unification of Indian culture in thought and action through the Varna system.

BRAHMANAS: The superiority of the Brahmana over the remaining groups is apparent for the Varnas are always mentioned in the descending order.[2] They are referred to as objects of devotion along with gods.[3] In the Rgveda, Brahmanas undoubtedly were regarded as superior Varna but their identification with the god was only achieved in the later Vedic literature.[4] Such claims are also made by them in the Jatakas.[5] Such hyperbolical claims are also expressed in the Dharmsastras and the Puranas. Manu goes to the extent and states that a Brahmana, learned or not, is a deity.[6] The Vayu Purana seems to be very reticent about the position of the Brahmana.[7] Their association with gods only suggest that they enjoyed the respect and confidence of the people[8]

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1. They were called Sat by Yajna 1.95. cf HD 11.1. p.64 fn.127.
2. BS iii.19; Anuvarna; lxxxi.4 Varnakrama.
3. Ibid. lxix.8,29,38.
4. Vedic Index ii.pp 32,454 ff.
5. Fick, pp. 30-31. cf BI pp. 60-61.
6. HD ii pp. 135 ff.
7. Patil, D.R., Cultural History from the Vayu Purana, p. 125.
8. BS ii.13.

at length.

The Bra hmanas are referred to as performing[1] sacrifices and officiating priests at religious ceremonies.[2] The Bra-hmana as an officiating priest at sacrifices figures from the Rgveda onwards. During the days of the Brahmanas, the institution of sacrificial cult was a monopoly of the Brahmana Varna. With the Upanisads started a reaction to the sacredotalism of the Bra-hmanas which culminated during the socalled Buddhist age which also sychronises with the theistic movement and cast off their superficial character.[3]

They were associated with royal courts particularly the king who sought their advice at critical junctures[4] such as the time of commencement of 'march' on the enemy. Their counsel was highly valued. The sight of a Brahmana on the occasion of the march was considered auspicious.[5]

The definition of a true Brahmana in the words of Varahamihira[6] is that who has studied and understood the Vedas with the commentaries. There were Brahmanas having specialised in the different Vedas - Bahurc[7] (Rgveda), Atharvana[8] (Atharvaveda) Chandoga[9] (Samaveda) and their is also a mention of the Caturavedya[10] (versed in four Vedas) and the Srotiya[11] (versed in one Veda).

1. BS xxiv.6; xliii.30; YY viii.2,3,8,12 etc.
2. Ibid, chs. xliii, xliv, liii and lix.
3. Radhakrishnan, S., Philosophy of the Upanisads, pp.24-25.
4. BY xv.15; xvi.30; YY xii.1; TY ix.2.
5. YY xii.11, xiv.23.
6. BS xi.19.
7. BY xviii.15.
8. Ibid. 13.
9. Ibid. 10.
10. Ibid. 7.
11. Ibid. 5. cf HD ii p. 131 fn. 290.

New Brahmanical communities also grew up. The Magas or Bhojakas, the Sun-worshippers, who originally come from Persia, now formed a well-recognised Brahmana community. It has already been described that Vara-hamihira was a Maga Brahmana. Among the astrologers who were called in Prabhakara-vardhana's court to read Harsas horoscope, there was a Bhojaka named Taraka. Bana's commentator Sankara says that the worshippers of the sun were mainly derived from the class of Bhojakas.[12] Alberuni in the eleventh century found them in large numbers in India.[13]

BRAHMANAS AND DANA: From the time of the Rgveda, the right of the Brahmanas to receive gifts has been recognised, which was the means of his sustenance. It was equally obligatory on the other classes to make such gifts.[3] The Satapatha Brahmana states that obligations go to the gods and the fee to the learned Brahmanas who are the human gods. The Brahmanas accepted the Dana in the shape of Daksina for performance of sacrifices and other religious functions, as has been cited by Varahamihira.[4] They were also felicitated at the "Sraddhas".[5] The gifts bestowed upon the Brahmanas in the prescribed manner were believed to secure the object for which they were given.[6] To avoid the evil effects of the portents, gifts to the Brahmanas were also recommended.[7]

1. HC iv. p. 128. Sankara Comm. on HC i. Ibid.
2. Sachau vol I, p. 21.
3. Vedic Index i.336. cf. HD ii pp. 827 ff.
4. BS xliii.38; xlvi.17,24,32,37,45,53-58,64, 71-72; liii.99; lx.11; 17-18; xcvii.17; cv.8; MY xvi.31; YY ii.23; ix.16-17.
5. BS ii.13.
6. YY iv.58.
7. BS xlvi.17.

VRATYA BRAHMANAS A Brahmana who failed to perform the Upanayana ceremony which marked the entrance of the pupil into the house of his preceptor for learning, in time, was excluded from all Dharma, and styled Vratyadvija.[1] The Upanayana sacrament was generally solemnised during the 6th and 16th years according to the different authorities.[2] According to Yajnavalkya[3] such a person was excluded from Savitri and so long as he did not perform the sacrifice called Vratyastoma,[4] he was to remain an outcaste. A few Brahmanas took to astronomy as their profession who acted as Royal Astronomers in the service of the king.

BRAHMANICIDE: Brahmanicide was considered to be the most heinous crime and a number of penances were prescribed for its atonement. Varahamihira refers to observance of Kapala-Vrata[5] for such atonement for Brahmanicide.

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1. BS lxxxvii. 39.
2. cf SLAI pp. 35-36.
3. Yaj i. 38. cf Manu ii. 39-40; xi.192; VDS xi.76-79. See also HD ii p. 376-79; Aiyangar, KVR, Aspects of the Social and Political systems of Manu Smriti, pp. 109-10.
4. BS ii. 14.
5. BS ix. 25. cf Manu viii.38; xi.72.

SECTION II

MARRIAGE

The institution of marriage is the most vital link between individual and society. This is at the very root of social life and is essential for regulating harmony of life in sex-relations and procreating of sons for perpetuating family line.[1] The purpose of marriage, according to the Rgveda, was to enable a man, by becoming a house-holder to perform sacrifices to the gods and to procreate sons. This Vedic ideal seems to be the basis of the institution of marriage in India by which the debt owed to sages, gods and manes is repaid by begetting children.[2] It has gone deep into our traditions.

Marriage was looked upon as a sacrament by the writers of the Dharma school while with the Arthasastrakaras[3] it was contract as far as the legal aspect of it was concerned, it was again treated differently by the legalists and ordinary writers.[4] The former referring to eight traditional forms of marriage, some of which are approved whilst others are condemned and the latter to married life generally including courtship, selection of damsels and some of the directions for the guidance of husbands and wives.

Our astronomer belongs to the latter school. He does not mention the eight traditional forms of marriage. But

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1. HD ii.1 p. 428.
2. Taittiriya Samhita, iv.3.10.5. cf Manu ix.106.
3. See for details Jayaswal, K.P., Manu and Yajnavalkya, Calcutta, 1930, pp. 221 ff.
4. Talboys Wheeler, J., Ancient and Hindu India p. 66, Calcutta, 1961.

he is very graphic about the conjugal love. He treats the men and women on the same footing. The selection of damsels, qualifications of a chaste wife and a good husband, rules of courtship and the characteristics of bad characters are very boldly represented by him.

Regarding the conception of marriage he seems to have followed the footsteps of Vatsyayana, who holds that 'no other girl than the one who is loved should be married'.[1] A great socialogist of his age Vatsyayana was fully conscious of the contemporary society which was being transformed from the shackles of orthodoxy to the reorientated affluent society of Gupta age.

This type of marriage was only possible in an unorthodox free society where there were many opportunities for social contact and where both males and females respected each other. Such a form of marriage enunciated by Vatsyayana and further expounded by Varahamihira should not be interpreted as Gandharva mode of marriage in which a youth and damsel are led by mutual desire to form a connection without the consultation of relatives i.e., parents.[2] But with Varahamihira and Vatsyayana the sanction of the parents was essential. The parents arranged after both sides were satisfied. People at large were not bound by

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1. Kama (Burton) iii.1.173.
2. BJ xxiv.16. Manu iii. 20ff; Yaj i.58-61; GDS iv.6-13; BDS i.20.1-9; Artha p. 151; APS ii.11.17-20; 12.1-2.
3. Kama iii.1.173.

the injunctions enjoined in the scriptures. The Gandharva mode of marriage was, however, also prevalent in the society of Varahamihira's time[1] and was recognised as legal.

Kalidasa[2] refers to four kinds of marriage viz., Svayamvara, Prajapatya, Gandharva, and Asura, out of which Svayamvara and Gandharva can be grouped under one head. Hence we find that there were at least three modes of getting married during the time under review. Varahamihira's conception of marriage is the fusion of Prajapatya and Gandharva-Svayamvara.

MARRIAGE RITUALS: The Vivaha Patala gives graphic account of the various stages of the marriage ceremony and rituals connected with the performance of marriage. The general outlook of the rituals and the ceremonies referred to in the Vivaha Patala and other works of Varahamihira is very important in the sense that they were solemnised with the same gusto and festivities in the Vedic and the later Vedic times including the sutra period, as in the times of Varahamihira with some local variations and other considerations.

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1. The Gandharva form of marriage according to some Dharma and Artha authors is valid for all (BDS 1.20.16). While Yajnavalkya says: "In the absence of persons who can give her away in marriage, the girl herself may select a bridegroom" (1.64) which is more or less similar to the ideas held by Manu (ix.90). The most explicit reference to the Gandharva marriage is found in the union of Dusyanta and Sakuntala described in the Abhijnana Sakuntala of Kalidasa. Harsa's Priyadarsika (Act III, p.66) recognises the legality of Gandharva. See also Kadambari, p. 413; Upamitibhava prapancakatha pp. 253 ff. (Bombay ed.).
2. Raghu vii. 13; xi.33; Sak.Act iii.20.

We have references[1] to wooing (Varana) when wooers formally go to the girl's house and have the consent of the parents of the girl.[2] Vatsyayana gives a detailed account of the methods of selection of the bride. After the formal selection the horoscopes of both the boy and the girl were properly checked and tallied. This new development seems to have come into vogue in the wake of the rapid spread and belief in the astrology. The astrological considerations came to be reckoned with as a deciding force in such matters. This factor is still considered to be more important than any other consideration in the orthodox Indian society. The marriage was recommended only if the Rasis were favourably inclined to each other,[3] and not otherwise.

Then start the regular festivities concerning the marriage after the final recommendation of the astrologers[4] which included the performance of auspicious sacrifices by the bridegroom in his own house followed by the madhuparka ceremony.[5] The Harsa Carita[6] refers to this practice. In the Punjab, it is observed invariably and also in the adjoining regions of the Uttar Pradesh viz., Meerut with some variations.[7] This practice is not mentioned in the Vedic texts. It seems to be a later development noticed in various regions, not embracing the whole of India. Simultaneously

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1. BJ xxiv.16.
2. Kama iii.3.1-44.
3. For details see B.J. and L.J. relevant portions.
4. Pat 96.
5. Ibid.
6. Canto iv.
7. Cf HC ,A Cultural Study (Hindi), p.83.

in the bride's house, the girl worships Indrani.[1] A clay image of Indrani was taken to a nearby tank or the bank of a river in a procession by ladies where the image was properly bathed and worshipped by the bride. The worshipping ceremony was performed three times a day i.e., in the morning, afternoon and evening, until the marriage. In the Grhasutras, the ceremony was known as Indrani Karman. It was performed differently during the times of Varahamihira in which the high priest of bride's family offered sacrifice, followed by a dance of four or eight married women, not being widows. Sudarsanarya,[2] the commentator of the Apastamba Grhasutra, mentions the rite to be performed without mantras. The practice of Indrani worship was followed during the times of Harsa.[3] Kalidasa refers to it also.[4]

The marriage procession[5] then starts for the bride's place. After the other formalities, marriage is solemnised before the fire,[6] where the Kanya-pradana or the formal giving away of the bride now takes place, which is followed[7] by Pani-grahana ceremony, the grasping of the bride's right hand by the bridegroom with his own right hand. The marriage was conducted under favourable stars. To ward off all sins it was necessary to consider the asterism, the Tithi, Karana,

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1. Pat 9-14.
2. HD 11 p. 527.
3. HC Canto iv.
4. Raghu vii. 3.
5. YY v.11. cf MV x.17.1.
6. Pat 96.
7. BS c.7; Pat 14.

Yoga and Lagna for a favourable marriage which bestows abundant wealth, sons, sound health and leads to the husband's affection and gives happiness to men.[1] Varahamihira[2] describes the auspicious occasions for marital rites elaborately in the Vivaha Patala and the Brhat Samhita. The ceremony has been very much emphasized in the Sutra literature. The local practices are also referred to.[3] The Vedic conception of marriage rituals was still followed during the times of Varahamihira. The over-emphasis on astrology is the only development which has been added to the marriage rituals during our times. The astrological considerations, no doubt, were taken into account in the Grhasutra literature but it was just the beginning which attains its maturity around the time of Varahamihira.

COURTSHIP: Varahamihira's views on the treatment of women in course of winning their affections deserve a special attention. 'Courtesy'[4] is the primary factor employed for courting love

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1. BS civ.13; c.7-8. Marriage should be solemnised in the asterisms Rohini, the three Uttaras i.e. Uttarasadha, Uttarabhadrapada and Uttaraphalguni, Revati, Mrgasiras, Mula, Anuradha, Magha, Hasta and Svati; when the signs Kanya, Tula or Mithuna are in the rising; when the benefics are in the bhavas other than the 7th,8th and 12th; when the moon is in the 2nd,3rd or 11th house from the Lagna; etc. cf BS xcviii.2; Pat 80-83. The Baudhayana Grhasutra (1.1.20) mentions Rohini, Mrgasirasa, Uttaraphalguni and Svati as marriage constellations. The Apastamba Grhasutra (iii.3) mentions only Nistya (Svati). According to the Asvalayana Grhasutra (1.4.1), marriage may be solemnised in northern solstice and an auspicious asterism. In the Ramayana, marriages of three brothers of Rama were performed in Uttaraphalguni (Rama 1.71.24). cf Mbh. Adi viii.16. For details see HD ii pp. 511-15.
2. Ibid. ch.civ(full) and the Pat.
3. Pat. 79.
4. BS lxxv.5.

and gradual winning of the girl's confidence. The women are said to be highly sensitive creatures, hence tactical moves are advised to become the idol of their heart. To achieve this end in a valorous manner the lover must shed pride, arrogance and harsh words.[1] Charms, potions and such other quack remedies produced only many harmful effects and engender aversion.[2]

AFFECTIONS: The affections of the young lady are shown by outward signs and actions such as loosening the locks, twitches and tremblings of the eyebrows, sidelong glances, retrying garments, exposing navel, arms, bosoms and ornaments, loud clearing of the throat and spitting, loud laughter in the presence of the lover, rising towards him from couch or seat, producing sounds with limbs, yawning, asking for trivial and easily available things, embracing and kissing a child, looking significantly at a female companion, casting glances at him when he looks elsewhere, enumerating his virtues and scraching ears.[3]

DISAFFECTIONS: The disaffections of a woman even after too much of wooing are indicated by her frowning face, turning away the face (from the lover) forgetting the good done by him, lack of interest in his presence, frightfulness, kindness towards his enemies, harsh words, shuddering on touching or seeing him, assuming arrogance, not preventing him from going away and wiping off the mouth after a kiss.[4]

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1. BS lxxv.6.
2. Ibid. 5.
3. Ibid. lxxviii.3-5.
   cf Kama pt. iii ch. iii pp. 181 ff.
4. Ibid. 7-8.

GO-BETWEENS: Exchange of the love letters between the wooer and the wooed was done through the Buddhist nuns, female ascetics, handmaids, nurses, virgins, washerwomen, flower-sellers, corrupt-women, female companions and barber's wives who also served as go-betweens.[1]

OCCASIONS: Women come in contact with their lovers on the occasions of nocturnal recreations, vigils, professions of illness, staying in mother's house, consultations with soothsayers, taking part in congregational mournings, and festivals.[2]

RENDEZVOUS: The meetings were arranged after the successful wooing in the Nature's own background. The charming ladies used to charm their handsome lovers with amorous sports in the natural environments of the watersheds decked with lotuses and lilies, the trees blossoming and the bees humming in the parks.[3] A woman should go clean in body and thoughts for mind is the birth-place of love.[4] Decorating herself with rustic colours and indulgence in boorish talk by a woman in the company of her lover during such blissful rendezvous were not considered proper and conducive to love.

BRIDE-TO-BE: Varahamihira's contentions for a bride-to-be are the echo of the Gupta society as enjoined in the Smrti

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1. BS 1 xxviii. 9-10.
2. Ibid. 11.
3. Ibid. xlx.5. cf Kama. iii.iii. pp 181 ff.
4. Ibid. lxxviii.14.

literature of that of Vatsyayana. Youth (Yauana), beauty (Rupa), dress (Vesa), courtesy (Daksinya) and education (Vijnana) are some of the outstanding characteristics of 'Gems of women'.[1] Yajnavalkya enjoins that a man should marry a girl with auspicious characteristics, who had not belonged to another man, who is lovely, younger and free from disease, who has a brother, and who belongs to a great family of 'Srotriyas' whose ten ancestors are renowned.[2]

Attractive and charming physical features are a sine qua non of a maiden. Varahamihira observes in this regard that the face of a maiden should be as bright and spotless as the autumnal full Moon, eyes like the petals of lotus, beautiful and sparkling teeth, fine ears, hair resembling the belly of the bees, a voice as sweet as that of an intoxicated cuckoo, red lips, hands and feet as tender and charming as lotus-petals, a slender waist bending under the weight of the bosoms, a navel with turns from left to right, thighs similar to plantain trees, fine buttocks and excellent loins - such a woman will win the love of her husband.[3] The Kanya-laksanam chapter of the Brhat Samhita is a magnum opus on this point.

A person should shun the following types of women: one who has squint, grey and fickle eyes; one who has dimples in her cheeks; one with bad character and devoid of chastity;

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1. BS lxxvii.13.
2. Yaj i. 52-54.
3. BS cv. 10-12.

one with black-gums; one with big, protruding and unequal teeth; one that is too tall, as well as one whose upper lip is covered with too much hair[1]; one with unequal ears; one with a very broad fore-head; and many others. Such women are harmful to their husbands, bring misery and sufferings and are of quarrelsome nature.

Those women who have a wicked nature and who are impatient during coitus, ought to be shunned. Inauspicious are those whose blood is dark, blue, yellow or slight copper-red. A woman that is sleepy, has too much blood and bile, has a dripping (burning) organ, is of a rheumatic and phlegmatic constitution, gluttonous, sweaty, with deformed limbs, short-haired, and with (prematurely) grey hair, is declared sinful.[2] A woman who goes to bed first and gets up last, one who is arrogant and fretful, is one not worthy of a good man.[3]

In addition to the above qualifications, the bride should be virgin[4] and young.[5] Varahamihira thus like Vatsyayana and Manu, is very particular with regard to the qualifications which he thinks are necessary in the bride-to-be but is unlike Yajnavalkya who does not dilate much upon these so-called defects, thereby affording an opportunity to the parties concerned for choice. How far the above rules were mandatory or obligatory, it is really difficult to determine.

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1. BS lxx.15-22.
2. Ibid. lxxviii. 16-18.
3. Ibid. 7-8. cf Kama iii.1. pp. 174-75; Manu iii.6-11.
4. Kumari BS lxx.1; Kumarika Pat 64; Kanya Ibid.10,13; YY ii. 14; Kanyaka Pat 8, 20.
5. Yauvanastha Pat 8.

AGE OF MARRIAGE: The fore-going references indirectly confirm the view that the marriage was solemnised at an advanced age i.e. , after puberty, which is contrary to the rules enjoined in the Dharma-sastras[1] which prefer mostly pre-puberty marriages.[2] But Yajnavalkya like the early Sutrakaras is very prudent and remarks that the wife must be younger in age than her husband. One can deduce any thing from this vague statement. It is generally assumed that the lowering of the marriagable age of the girls was accelerated among other things by the desire to maintain absolute physical chastity of women.[3] Political conditions are the important factor in guiding the destiny of the women folk. If there is political stability, peace, prosperity at home and prestige abroad, the people will be carefree having very little time to ponder over such frivolous matters and the vice-versa. The Gupta age is an age of fulfilment which is also reflected in the conception of mature-marriages. The actual state of affairs can further be exemplified in the marriages of Vasavadatta in the Svapna-Vasavadattam; ; Vasantasena and Madanika in the Mrcchakatika; Sakuntala in the Abhijnana Sakuntalam; Malavika in the Malavikagnimitram; Urvasi in the Vikramorvasi; Malati in the Malati-Madhava; Rajyasri in the Harsa Caritam; Prabhavati Gupta daughter of Candra Gupta II etc.

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1. Manu ix.94; VDS xvii.18; BDS iv.1.12; cf Visnu iii.10.16.
2. Yaj i.52; GDS iv.1; cf HD ii pp. 439 ff; Altekar Women pp. 49 ff.
3. cf HD ii p. 443; Altekar Women pp. 57-58.

GROOM-TO-BE: A bridegroom should possess a body verily like that of Eros and have all the amenities and comforts of life such as a conveyance, when fatigued; food, when hungry; drink, when thirsty; and protection, when frightened.[2] The physical features are elaborately described in the chapters Purusa-Laksanam and Panca-Maha-Purusa-Laksanam of the Brhat Samhita which need not be quoted here.

Amount the other qualities of the bride-groom, he should be pure on his parents' side, handsome, young and of known character.[3] Varahamihira's contention that the bride-groom should be pure on his parents' side may be interpreted through the statement of Manu[4] who holds that ' for the first marriage of the twice born men, wives of equal castes are recommended'. It was termed as 'Sajati-marriage'. It is based ultimately on the orthodox views[5] held by some of the earlier writers like Apastamba who maintains that a man must marry in his own varna only i.e. , he does not allow a Brahmana, Ksatriya, Vaisya and Sudra to marry outside their own castes. In the whole range of early literature this view is rather an unfavoured one.[6] Manu observes that a Brahmana after his first marriage if he again wishes to marry can take a wife from the succeeding

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1. BS cv.9.
2. Ibid. lxviii.116.
3. Pat.S. Regarding good qualifications of men see Kama iv. ch.1 p. 247.
4. Manu iii. 11.
5. APS ii. 13.3.
6. Manu iii. 12-13. We find an almost identical view in the BDS i 16.2-5; and also Visnu xxiv.1-4; Yaj 1.57.

castes, the Ksatriyas from two and the Vaisyas from one i.e. , from the Sudra caste, besides a girl of their own caste. It can be further testified by the innumerable instances of higher caste men marrying not only the Sudra girls but even the foreigners which can be cited from our age.

Yajnavalkya[1] and Narada[2] speak much about the qualifications of the bride-groom on the biological side. According to Vatsyayana the bride-groom in addition to the above mentioned qualities, must have completed his course of studies.

INTER-CASTE MARRIAGES: The marriage was preferred within one's own caste, but deviations were prevalent.[4] Inter-caste marriages have been referred to by Varahamihira. The terms like Parasava (Nisada) Ugra, Candala, and Svapaca are definitely Samkara-Jatis, resulting out of the Anuloma and Pratiloma marriages. A Parasava or Nisada is an offspring of a Brahmana father and Sudra mother. Likewise, an Ugra is from Ksatriya father and Sudra mother,[5] whereas an Ambastha is from Brahmana father and Vaisya mother.[6] All these denote Anuloma type of mixed castes. Similarly Candala is born from Sudra father and Brahmana mother.[6] This category is mentioned as Pratiloma type of Samkara-Jati.

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1. Yaj. 1.35, 54-55.
2. Narada xii.8-9, 16,18.
3. Kama iii. 1,2.
4. APS ii. 13.3; Watters 1.168.
5. Yaj 1.91-92; cf Manu x.8-9, 16.
6. Ibid. 94. cf GDS iv.17; Artha p. 115; Manu x.11-12, 16-17; VDS xviii.15.

The prevalence of the inter-marriages can also be cited from the numerous contemporary literary[1] and epigraphic[2] sources. Such marriages[3] are approved by the legalists and other writers like Vatsyayana. The rigidity of the mediaeval times had not yet become so acute.

POLYGAMY: Polygamy in restricted form seems to have been prevalent in the upper strata of Indian society during the times of Varahamihira.[4] He refers to persons having more wives.[5] The co-wives (Sapatni) and a man having two wives[6] are also mentioned. The practice of polygamy was sanctioned almost by all the Dharmasastra writers.[7] In view of the Smrti writers, the number of wives one could legally have varied from caste to caste. The Brahmana Harichandra, founder of the Pratihara line of Mandor, married two wives, one a Brahmana and the other a Ksatriya.[8] Generally it was confined to the upper three classes.[9] The great sociologist Vatsyayana also refers to such a practice.[10] In addition to the enjoyment the main necess-ity for a second marriage was to beget a son.

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1. Daughter of Harsa of Thanesvar belonging to Vaisya family married Ksatriya king of Valabhi. (Watters ii. 246). In the Mrcchakatika, Brahmana Carudatta married Vasantasena; Brahmana Sarvilak married her slave Madanika. In the Harsa Carita (Canto I) Bana's father married a Sudra wife by whom he had two sons. In the Dasakumara Carita , the prince marries the younger daughter of a courtesan of Campa.
2. Prabhavati Gupta married Brahmana Vakataka Rudrasena. EI viii.24; SI pp.197,221,407, 411 ff. For other references see EI xv.301; ASWI iv.140. cf HD ii.1. p.450.
3. Yaj ii.125; Manu iii.12-13; BDS i.16.2-5; Visnu xxiv.1-4. cf HD ii.1. p.54 fn 127; SLAI pp.15,65.
4. BS lxxvi.5.
5. Pat 19,34.
6. Dvibharya BY xviii.16; YY iv.55.
7. cf Yaj i.57; Manu iii.12-13; BDS i.16.2-5; Visnu xxiv.1-4.
8. EI ix. p. 279. cf EI I, p.156.
9. Kama iv ch ii pp. 205 ff.
10. cf BS lxxiv.14.

Almost all the kings of the Imperial Gupta dynasty had numerous wives as is evident from the various inscriptions. Bana, in the Harsacarita, mentions his step-brothers. The commoners were not debarred for we have a reference from Varahamihira's wherein it is mentioned that the happiness of a poor man with two wives comes to an end[1], from which it can be generalised that the practice of polygamy was a habit among the people and not essentially a way of life.

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1. YY iv. 55. cf Sisipala Vadha Kad p. 352. Sukra Niti Sara III. 191-92; of Magha VII. 7-11; VIII.36-44;

SECTION III

POSITION OF WOMEN

Unlike Manu,[1] Varahamihira had a very high respect for the women folk who maintains that Soma gave them (Women) purification; the Gandharva, sweet speech and Agni, perfect purity.[2] In short women are always pure like pure gold. Almost similar accounts are found in the Baudhayana Dharma-Sutra[3] and Yajnavalkya Smrti.[4]

Woman is the purest 'gem' created by the Almighty, in the words of Varahamihira[5] for this 'gem' gives delight to men, when heard of, seen, touched or even remembered. According to him,[6] she is the cause of every thing in the world. It is for her sake that the righteous deeds and wealth are amassed and men derive worldly pleasures and offspring. Therefore, she must be respected and honoured in the house, for she is the Goddess of Laksmi.

What Varahamihira states is the common tradition of Indian life.[7] Respect for women is enjoined in the Dharmasastras and the Great epic.[8] Though Varahamihira differs from the attitude of Manu, whom, he however, follows in another respect

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1. Manu ix. 17-18.
2. BS lxxiv. 7. cf Ibid. 8-9.
3. ii. 4-5.
4. Yaj i. 71.
5. BS lxxiv.3.
6. Ibid. 4.
7. Yaj i. 82.
8. Mbh xiii. 46.3,5-6,15.

when he holds that 'those houses that are cursed by women being not properly treated, will totally perish, as if destroyed by witch-craft.[1]

In his spirited defence of women Varahamihira observes that the men have no right to censure them (women) and slander them.[2] It reminds one of the audacity, he says, of clever thieves who are actually found stealing and yet crying "Thief, stop"![3] Varahamihira denounces the men for their imprudence and ingratitude[4] but praises the women folk for their virtues,[5] conviction and courage.[6] He places both husband and wife on the equal footing in the witness box in regard to the established Hindu moral code.[7]

The women of the age of Varahamihira thus moved in every sphere of life without any inhibitions or prohibitions and also did not live in seclusion. Pardah system was totally banished. Women were very well-versed in the study of philosophical texts like the Moksasastra.[8] Varahamihira refers to a Brahmavadini, a class of women well-known for their proficiency in all the sciences.[9] We hear of women in Jain texts who distinguished themselves as teachers and preachers.[10]

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1. BS lxxiv.10. cf Manu iii.56.
2. Ibid. 11.
3. Ibid. 15.
4. Ibid. 16.
5. Ibid. 6.
6. Ibid. 14.
7. Ibid. 12.
8. LJ xii.5. Princess Rajyasri was a great Buddhist scholar. HC p. 246. cf Mookerjee, R.K., Harsa p. 176.
9. Antagadadasao 5,7,8. (trans. L.D. Barnett, London, 1907).
10. BS xxiv. 15.

Another field in which the women skilled was in arts, music, both vocal and instrumental.[11] Rajyasri, according to Bana,[12] was trained up in song and dance by experts retained for the purpose. King Harsa in his own drama, Priyadarsika, records that the king assigns to the queen the task of arranging for the instruction of the maid, Priyadarsika, in dancing and vocal and instrumental music.

The women in the age under review were not disqualified from the exercise of public rights is proved by the example of Prabhavati-Gupta, daughter of Canara-Gupta II, who rules the Vakataka kingdom as regent on behalf of her minor son.[3] Another instance is that of princess Vijayabhattarika who acted as provincial governor under Vikramaditya I of the Calukya dynasty of Vatapi in the seventh century.[4]

The different faces of woman can be explained by various fanciful etymologies to the various synonyms of 'woman' given by Amarasimha in his Amarakosa.[5] A woman giving birth to daughters alone was denounced.[6] The preference for a son is in consonance with the other authors.

From the above discussions it is apparent that Varahamihira agrees more with Yajnavalkya and earlier writers of the Dharmasutras and Vatsyayana who looked upon the women folk with honour than with Manu who is somewhat harden with

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1. BS xxiv.4.
2. HC p. 247.
3. CA p. 180.
4. Ibid. p. 242.
5. Amara ii. 6.2-4. cf Jain, J.C., Life in Ancient India as depicted in the Jain Canons, p. 152. He explains the variants of woman referred to in the Prakrt Literature.
6. BS liii.72; Pat 34, 69.

them. But all the above mentioned authorities are of the same opinion that in a joint family she must have a place of honour.

WIFE: The Hindu conception of a wife is one with whom Dharma is practised.[1] Varahamihira stresses man's dependence on wife for Dharma, Artha, Karma and sons.[2] Mutual understanding, the very basis of wedded life, creates harmony and balance in the married life whereas bickering only disharmony, hence the latter must be discarded at any price[3] in order to achieve oneness in their personalities by adopting give and take policy - the husband by his confidence and the wife by her affections.[4] The results of such a union, according to Vatsyayana, are the acquisition of Dharma and Artha, offspring, affinity, increase of friends and untarnished love. The position of the Puranas with regard to this, however, accords with the general view-point of the Smrtis which called for absolute obedience and devotion of the wife to the husband.[5]

CHASTE WIFE: A beloved wife speaks sweetly to her husband, feels delighted at his sight, forgets his anger, drowns his faults by extolling his virtues, honours his friends, hates his enemies, feels grateful to him for his good turns and feels miserable when he is away.[6] The portraiture of the heorine in

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1. The wife was considered to be man's half without whom he could not perform sacrifices. Cf. Sata Br. v.2.10; Tait Br.ii. 22.6; Manu ix. 96.
2. BS lxxiv.4; Pat.15.
3. Ibid. v.97.
4. Kama pt. iii ch i p.173.
5. Cf Sastri, K.A.N., The Comprehensive History of India(ed.) 1951 p.478.
6. BS lxxvii. 5,6.

the Meghaduta drawn by Kalidasa betrays similar idea of an ideal wife. Among the many duties she had to perform was to go to sleep after her husband has fallen asleep and wake up early before him.[1] Vatsyayana's[2] description of the good wife exhibiting qualities of service and self-restraint as well as sound household management which have remained the hall-mark of Hindu wives down to the present day, has affected greatly the mode of thinking of our astronomer.

The terms 'vyayana'[3] meaning expending much and 'ayapraya'[4] meaning securing income denotes most probably her rights over budget of the household.[5] In her dealing with the other members of the household, especially the older stock viz., the parents-in-law and others, she was expected to be well-behaved.[6] Above all she was to make her conjugal love successful by breathing in unison with her husband and giving him the maximum affections[7] with sincerity.[8] Vatsyayana emphasises the learning of the Kamasutra besides the sixty-four subsidiary arts by which they can make their husbands favourable to them, even though they may have thousands of other wives besides them. At the same time she was expected to maintain a very high moral standard.[9]

Such a wife i.e., agreeable to her husband's mind

1. BS lxxvii.15.
2. See for details Kama (Text)iv.1.1-55; iv.2.1-38. Burton's pt. iv. ch.i pp. 197-201.
3. Ibid. 36.
4. Ibid. 38.
5. Cf Kama iv.1.32-33 and Manu ix.11.
6. Ibid 30-31, 44; cf RV x. 85.46.
7. BS lxxviii.15. cf Ibid. lxxv.1.
8. For details see Kama pt. i ch. iii p. 111.
9. Cf YY v. 12,34.

enhances the prosperity and happiness of the family.[1] A wife acting contrary to the interests of her husband is spoken of scornfully.[2] The wife was duly rewarded for all these penances and hard life.[3] Varahamihira observes that a guiltless wife was not to be deserted by her husband and if he does so, the husband had to undergo Apastambas penance by begging alms for six months, wearing donkey's hide with its hair exposed.

The instances of chaste women in ancient India[4] are ample. The Uttaradhyana records one Rajimati, who followed the footsteps of her husband and joined the ascetic order. Once Arttthanemi, his brother Rahanemi and Rajimati all were practising penance on the same mountain when Rahanemi lost self-control and began to court his sister-in-law. She later resisted boldly and baffled his attempt by offering him a drink in which she vomitted in his presence. Another example of chaste woman is Subhadra, daughter of a Sravaka. The chastity of princess Rajyasri is recorded by Bana, who was following her husband unto death till she was stopped at the last moment by her brother's very timely intervention. The character of Dhuta, wife of the hero in the Mrcchakatika exhibits typical instance of the good wife.[5] Varahamihira cites examples when virtuous women performed Sati along with their husbands out of gratitude

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1. YY v. 31.
2. Pat 44.
3. BS lxxiv.13.
4. ch. xxii.
5. BS lxxiv.16.

for the good turns done to them.

However, a caution is sounded by Varahamihira[1] who warns the devoted husbands to guard their wives against the nuns, female ascetics, handmaids, nurses, virgins, washerwomen, flower-sellers, corrupt women, female companions and barbers' wives who serve as go-betweens and present the greatest danger of bringing ruin to respectable families. Hence one should protect one's women from them in order to enhance the reputation and honour of the family. The astronomer further reiterates to be watchful and alert on the movements of the wives on the occasions such as noctural recreations, vigils, professions of illness, staying in another's house, consultations with soothsayers, taking part in congregational mournings and festivals[2] when women usually come in contact with them.

UNCHASTE WIFE: Numerous references to the unfaithful and unchaste wives[3] exist in the literature of Varahamihira and his contemporary writings.[4] The practice of polygamy which was prevalent in the age of Varahamihira was the primary cause[5] of adultery among the married women. The possibilities of meeting between unfaithful wives and their paramours were often chalked out by the go-betweens.[6] Vatsyayana deals with illicit love with married women in a separate branch of Erotics.[7]

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1. BS lxxviii.9-10. cf Kama i.5.37-39; iii.3,9,38; v.4,42-62; HD ii p. 564 fn. 1311.
2. Ibid. ii cf Kama iv.4.41; v.2.6.
3. Ibid. lxx.19.
4. cf DKC pp. 102 ff; 167 ff; Tantrakhyayika (Story of Cuckold Artisan and his wife).
5. cf Kama iii.4.55-56; iv.2.1; iv.4.72-90.
6. BS lxxviii.10-11.
7. Kama i.5.33-34.

Yajnavalkya[1] devotes four verses in connection with a wife who is unchaste and wicked. Unlike Manu,[2] Varahamihira is not in favour of any penances but holds that they are purified by their menses.[3] Elsewhere the punishment is also recommended.

COURTEZANS: She is quite a different sort of woman in ancient India. She can be neither called chaste nor unchaste. She is free woman belonging to a realm of her own and forming a class by themselves. They were highly accomplished.[4] The references to them are numerous,[5] the writers of which vie with each other in their description of beauty, splendour, and accomplishments. Varahamihira does not refer to the institution as such, yet the chapters lxxiv, lxxv and lxxvi of the Brhat Samhita betray his inclinations. The courtesans were provided with free housing accommodation in the vicinity of the palace. The dimensions of their houses,[6] according to Varahamihira, were equal to the difference between the measurements of the houses of the king and the Yuvaraja.

The purpose of this institution was to please the sovereign, who required pleasure of the company of a sweet-heart after strenuous career of wars of conquests. The essence has been brought out by Varahamihira thus: "When a country is conquered, the most important thing there is a city whereof the essential part is a palace and in this the most desirable portion

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1. Yaj i. 70,72-74.
2. Manu xi.177. cf Mbh. xii.165.63.
3. BS lxxiv.9; VDS xxviii.4.6; BDS ii.4.4-5.
4. GDS xxii.14; Manu viii.371; Artha p. 230; Mbh xii.165.64.
5. See Artha pp. 155-56. Kama pt vi pp. 243 ff is entirely devoted to this subject; Bharata's Natyasastra xxxv.59-62; DKC pp. 66-68; SBE xvii.105-8; MP 36; HC p.113; Watters ii. 254; AI ii p. 157; WTI p. 185.
6. BS liii.8.

is a room and even here the most beautiful thing is a couch, whereon a beautiful damsel, adorned with gems and gold ornaments is the quintessence of the happiness accruing from the possession of a kingdom.[1] Belonging to the same profession but of a lower degree was a Kulata[2] who was a degraded creature and sinful one. Kautilya treats their problems in a progressive manner.

REMARRIAGE OF WOMEN AND WIDOWS: Punarbhu[3] generally translated as remarried women, referred to by Varahamihira at many places, undoubtedly points to the fact that the widow-remarriage though unfavoured and condemned by the earlier Dharma law, was practised by the public at large. The legal writers who are influenced by the Artha ideals sanctioned the marriage of the widows. Manu[4] is against the remarriage of the widows.[5] But the later Dharmasastra writers viz., Narada[6] and Parasara[7] are in favour of widow-remarriage.[8] Vatsyayana vividly describes the behaviour of a Punarbhu after her remarriage and relations with the other members of the household as well as the friends of the husband.

The references to the widows are equally numerous,[9] which suggest that many widows remained unmarried who preferred neither marriage nor Sati and who sacrificed everything for

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1. BS lxxiv.1.
2. Ibid. lxx.16.
3. Utpala xxxi.3.
4. BS xxxi.3; BJ xxiv.4,9.
5. Manu v.152; viii.226; ix.47,65.
6. xii.97.
7. iv.30; cf Yaj i.67, 86.
8. Kama pt iv ch II pp. 204 ff.
9. BS lxxxvi. 79; Pat 33,40,59 etc.

rearing up their children.[1] Vatsyayana[2] refers to the Superintendents of widow-houses, according to which the welfare of the widows was looked after by the government.

DIVORCE: Divorce was possible under certain circumstances mentioned[3] elaborately in the legal texts of the age. The astronomer[4] enjoins that in order to absolve himself of the sin of transgressing his faultless wife, a man should wear for six months the hide of an ass with hair exposed and beg for subsistence saying, "give alms to the transgressor of his wife", which is completed by the Apastambha Dharma Sutra[5] on which the above verse seems to have been based, adds that the transgressor should beg at seven houses.[6] Varahamihira says that according to the Sastra men and women are equally sinful in transgressing each other but men pay no heed to it.[7] A reference to the divorced women obtains in our text which leads to the impression that the legal dissolution of marriage was allowed during the age under certain circumstances.

SATI: Sati, voluntary self-immolation of widows on the funeral pyres of husbands, was prevalent in the times of Varahamihira[8] who refers to it with flattering words in regard to women, and so does the great poet Kalidasa[9] who is also fully in favour of this custom and commends it as being natural as[10]

1. BJ xiv.2.
2. Kama pt v ch 5 p. 231.
3. Manu ix.72. cf Artha p. 188; Yaj i. 66.
4. BS lxxiv.13.
5. APS 1.28.19.
6. BS lxxiv.12.
7. BJ xxiv.8,9.
8. BS lxxiv.16. cf Sukraniti iv.4.29.
9. Kumara iv. 33,35,36,45.
10. Ibid. iv. 33.

illustrated by him in the context of Rati who plunges herself on the burning remains of her husband.[1] But a pregnant wife was exempted from performing the custom.[2] Bana, who was personally opposed to the custom of Sati,[3] had left us a vivid picture of the actual performance of a Sati, not only by the principal queen Yasovati,[4] but also the co-wives.[5] Vatsyayana also makes a note of it.[6] Sudraka does too in the Mrechakatika.

The references to this practice can be traced back to the time of Alexander[7] and some references are also found in the Mahabharata.[8] Though the beginnings date from pre-historic times, which having hardly survived in the Vedic age except in a symbolic funeral site, revived, according to Macdonell,[9] for some reason that is not quite clear, to such an extent that by about 600 A.D. it seems to have become universal. That it became more common with the advent of the Guptas can be testified by ample evidence from inscriptions as well as literature. The Eran posthumous stone pillar inscription of Goparaja dated A.D. 510-11,[10] records that when he died in a battle his wife "devoted, attached, beloved and beautiful, in close companionship, accompanied him on the funeral pyre." The increasing extra regard for chastity which was responsible for the prohibition of widow marriage led to the growing popularity of Sati during the period succeeding the Imperial Guptas, even though there were

1. Kumara iv.20-22.
2. Raghu x ix.50.
3. Kad pp. 318-19.
4. NC pp 150-51. See also Priyadarsika Act I p. 96.
5. Kama vi. 2.53. See also Chakladar Social Life, pp. 129-30.
6. Act x. See also Venisamhara Act VI, p. 183; ZDMG xl. p. 39.
7. Invasion of Alexander p. 367.
8. i. 138. 77.
9. IP pp. 78-79.
10. CII iii.p.93. of IA ix 1880 pp. 164-66; Bhandarkar's List of the Inscriptions of Northern India, No. 107.

many thinkers who realised the absurdity of the custom.[1] Smrti writers of the post-Gupta period stated that a woman dying on the funeral pyre of her husband would enjoy eternal bliss in heaven.[2] It also became a prevalent belief that Sati was a sure means of the reunion of the wife with her husband after death. It became more and more rigid and vigorous as the timeflapsed until it was banned by the British Government in 1829.

The Jain dogmas[3] oppose the custom of Sati and so do the Buddhist.[4] Asceticism is accepted as a way of life by both the schools of thought and the widows are registered as nuns who live a life of purity and restraint. A life of austerity was the option allowed to widows by many writers. Parasara, for instance, says that a widow who observes the vow of celibacy goes to heaven after death like the Brahma Carins.[5] Sukra expected a chaste widow either to accompany her husband, i.e., to be a Sati, or to observe the vow of chastity.[6] Chastity was very essential in one's life and since it cannot be preserved alone, hence in order to refrain from immorality the women must burn themselves on the pyre along with their husbands. The economic factor nevertheless played no insignificant part, but it was more so in the mediaeval times, when this custom becomes more as an oppression than a remission.

1. Medhatithi on Manu v.156.
2. Daksa S. iv.18-19. See also Aparaka's Comm. on Yaj.I.87, DKC p.9; Sac-ban, II p. 155; KT, v.326-7; vi.197; MD. i p.9.
3. The Jain literature does not refer to the custom of Sati except one in the Mahanisiha but she refrained from it. Jain, J.C., op.cit., p.163.
4. Divakarmitra's advice to Rajyasri, HC ch vii.
5. ch. iv.31. cf Manu v.157-162; HC v p.171; Kad p. 42.
6. Sarkar, B.K. (Trans.) p. 163. cf Vyasa Smrti II.53.

SECTION IV

SUPERSTITIONS AND BELIEFS

Superstitions played a vital role in the lives of the ancient people, particularly among the uneducated teeming masses. No country remained untouched by the wave of their influence. The Ancient Egyptians, Sumerians, Akkadians, Elamites, Babylonians, Jews, Chinese, and not to speak of the Harappans were all aware of such practices. The inter-dependence of priests and superstitions is so overlapping that their origin at the hands of priestly communities is hardly questionable. They were the interpreters of these omens and also curers of their malefic influence through magical rites and counter-antidotes, popularly known as the various talismans. India was no exception to it where magic formulae are in vogue since the times of Atharvaveda.[1] But the most interesting study is found in the works of Varahamihira which goes to prove the old maxim that an idle's brain is a devil's workshop, which may be interpreted in relevant historical context, that the peaceful surroundings bequeathed by the Gupta rulers to its public ushered an era of creative thinking and the reference under discussion is the outcome of such leisurely pastimes. It was so perfected as to be bracketed with science. Their spokesman

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1. Or even earlier from the Harappans people, since no written record is available prior to the Atharvaveda, which particularly among the Vedas, deals with the science of magic and allied subjects.

was Varahamihira who mentions a long list of writers who seem to have written on this science.[1] The popularity of subject cannot be underestimated for Dravyavardhana,[2] King of Avanti, is said to have compiled a book on superstitions, who incorporated in his book the works of Sage Bharadvaja, the seven seers, Garga and others.

It appears that life, speaking generally, was under the sway of superstitions and the compilation of the texts on omens, superstitions and other related subjects was a necessity to enlighten the people on such problems.[3]

CLASSIFICATION: Omens are of various kinds:[4] rural - men, horses, elephants, dogs, wild-lions, tigers, boars, deer, etc.; acquatic swans and the like; terrestrial - mangooses, serpents etc.; diurnal (those that roam by day) Cuckoo, hawk, hare-killer, Vanjula, peacock, vulture, cock, sparrow etc.; nocturnal-hair-eater Pingala, Cippika, Valguli and hare; diurnal-nocturnal-man, horse snake, camel, leopard, lion, bear, wolf, deer, dog, cow, goat, tiger, swan, spotted antelope, stag, jackal, porcupine, cuckoo, cat, crane and boar; and heavenly.

The sex of the creatures is to be determined from their cry, gait, look and speech but when there is doubt as to whether a certain bird crying is male, female or eunuch, it is to be guessed from the sex of a person talking nearby. It could also be ascertained by their appearance as well for the male

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1. BS lxxxvi. 1-4.
2. Ibid. 2.
3. How deeply the people were engrossed in superstitions can be seen from the description of various means adopted by Vilasavati to get a son. For details, see Kad. Eng. trans. C.M. Reading, pp. 55-56.
4. BS lxxxvi.6.

creatures have fleshy, high and large shoulders, broad necks, a fine breast, small but deep sound and great valour (or firm gait); whereas the female ones have slender breast, head and neck, small face and feet, little courage and harmonious and melodious voice. Those that are possessed of characteristics different from these are eunuchs.[1]

The list of such superstitions discusses variour omens both good and bad. The chapters on omens show that the birds were believed to unfold the good or bad fate awaiting a man. The soothsayers were expected to read one's future on the basis of bird's sounds. Their gentle cooing or twitter was deemed to be good. The list is very exhaustive and a detailed study thereof may not be considered desirable here.[2] However, some of the common superstitions and beliefs mentioned by Varahamihira which can be duly supplemented from the contemporary literature of the Gupta age, may be given. Throbbing of the right eye of the women was considered to augur ill.[3] While the throbbing of the left one was good.[4] The trepidation of right arm in the case of men was reckoned auspicious.[5] Many evil signs mentioned are, running past of the rows of black deers, buzzing of bees in one's yard, howling of jackals in day-time, swooping down of vultures without there being any visible victim, appearance of untimely flowers,[6] falling of chowries from the servants' hands etc. The

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1. BS lxxxvi. 8-9.
2. Ibid. chs lxxxix, xc, xci, xcii, xciii, xciv, xcv deal with the superstitions of dog, jackal, wild animals, cow, horse, elephant, crow, terrestrial and aquatic animals elaborately.
3. Sak act v p. 68.
4. Mal act v p. 130.
5. Sak act i. 15, p.8.
6. HC v. pp. 200-201.

heaving of the earth, the upheavels of the seas, the appearance of the comets, the sight of the human offering in the guise of a headless trunk in the sun's circle, the extreme redness of the quarters, the dimness of the sun's brilliance by dust showers and the discordant howls of jackals[1] with uplifted muzzles, were all considered portents of evil omen. A crow crying out from a burnt-out tree and meeting with a Digambara Jaina were thought inauspicious.[2] The granting of gifts to Brahmanas was believed to bring about good.[3] Amulets, used as means either for defence or for the achievement of triumph,[4] were worn by men and children in lockets generally on their wrists.[5]

It is interesting to note that the malefic effect of the superstitions could be nullified by exercising Yoga. If the first omen is harmful, one should do eleven Pranayams; if the second too proves evil, he should do 16 Pranayama and if the third too persists in being malefic, he should abandon the idea and return home.[6] The effect of bad dreams, bad thoughts, bad sights and wicked actions could easily be removed by hearing the Moon's passage over the stars.[7] The Agni Purana prescribes various devices to counter-act the bad effects of dreams, such as, a ceremonial ablution, propitiating the Brahmanas, pouring oblation of clarified butter with sesamum into the fire worshipping gods like Hari, Brahma, Siva, Gauri and the Sun and reciting the Vedic hymn Purusasukta.[8]

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1. HC v pp. 146-47.
2. Ibid. pp. 134-35.
3. Ibid. p. 134.
4. Sak act vii p. 115.
5. Raghu xvi.7.83.
6. BS xcv. 62.
7. BS ii. 21.
8. ch. 229. 14-15. cf Venisamhara Act ii, pp. 41,52.

It was considered possible to stupefy venomous cobras in a charmed circle,[1] and cure the snake bite by means of the Udakunibhavidhana rite with which the snake-doctors seem to have been familiar. A serpent's image, charmed, was supposed to serve as an antidote as well; but the bite, if feigned,[2] was considered to turn out genuine.

It was common belief that a miser after his death becomes a snake to protect his wealth.[3] The faith in talismans continued to the days of Bana. These were considered to ward off evils[4] and sometimes a few ashes mixed with mustard seed, with a drop of ghee in it was placed on a child's palate.[5] The necks of children were adorned with "rows of tiger claws"[6] evidently for an auspicious purpose. The people had great faith in palmistry, astrology[7] and consequently in fortune-tellers (Daiva-Cintakas).[8] It may well be said here from the above account that superstitions had a preponderating influence upon the people at large during the age.

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1. Nagini 11.32.
2. Mal act iv pp. 122-23.
3. Sak act vi. 28; Kad. p.131; HC iv.p124; v.p150; vi.p.185.
4. HC p. 166.
5. Ibid.; Kad p. 54.
6. Ibid., p.17.
7. Kumara v. 58.
8. Mal Act iv. p.107. cf Artha EK v. ch iii p. 308; DKC p. 168.

SECTION V

AGRICULTURE

Varta[1] is the general term denoting the sphere of the economics. It invludes agriculture, usury, commerce and cattle-breeding.[2]

Although quite a number of towns and cities had developed in India during this time, the major part of the population still lived in villages. Agriculture being the main occupation of these people played a vital role in the national wealth of the country. Despite the growth of industry, trade and commerce the State had to patronise agricultural activities in order not only to stabilise the economy but also to provide employment. A study of the history of the period under review reveals that rulers took active interest to boost the productivity of the land and enrich the cattle wealth by providing numerous facilities to the peasants.[3] Therefore, it is but quite natural that Varahamihira has dealt in detail with various subjects connected with agriculture which played such a conspicuous part in the society during this time.

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1. BS x ix.11 cf. Artha i.4. p. 8.
2. Sukra i.311-12- cf. Raghu xvi.2; Kamandaka 11.20.
3. CII iii. p. 56.

VEGETATION: The vegetation of India which could not escape the observant eye of Varahamihira has been treated exhaustively. India's flora is gifted with almost every natural family of the world.[1] Several different species of the plant life of the world are found and preserved in the flora of India. The number of recorded species of flowering plants comes to about 17,000 under 176 families and there are about 600 ferns and fern allies,[2] 3000 mosses and 178 liverworts.

CLASSIFICATION: The term Vanaspati denotes the plant life in general and trees in particular.[3] The floral classification[4] comprises three main branches viz., trees (Vrksa, Taru, Padapa and Druma); shrubs (Gulma) and creepers (Lata, Valli) in general.[5] The terms Lata and Valli though often used synonymously, the distinction, according to the Amarakosa,[6] lies in the fact that the Lata is a twining plant while Valli is a creeping plant.[7] Pratana is yet another term denoting a creeper with stems spreading on the ground.[8]

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1. For details see Introductory Essay to the Flora Indica, p.91.
2. Vedic Age, p. 108. According to Chatterjee, 38 per cent of flowering plants of India are exotic. Ibid.
3. BS xxix.1.
4. Ibid. lv.18. Vanaspati is defined as a tree that bears fruit without flowers (Amara ii.4.6.; Caraka Sutrasthana 1.36; Susrata Sutrasthana i.23 and Manu 1.46.
5. Ibid, xxix.14; xli.7; liv.100-1, 105; xi.2; xciv.13.
6. ii.4.9,11.
7. BS xlviii.5.
8. cf Manu i. 42.

According to another classification, the vegetation has been classified[1] into the fruit (Phalin, Phaladruma, Phalataru)[2], flower (Puspadruma)[3]; thorny (Kantakin) and Milky trees (Ksirataru)[4]. Commenting on the above classification Utpala remarks that Khadira etc., are thorny trees while Bijapura etc.,[5] are fruit bearing. Still another system of classification followed by Varahamihira is based on gender.[6] It is not improbable that the colour was the main distinctive feature of the blossoms' classification. We have ample reference to red, yellow, white and black flowers.[7]

The Osadhi plants imply the herbaceous varieties[8] having medicinal properties. Ksupa is another plant variety[9] which is explained as having minute branches and roots.[10]

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1. BS liii. 84-85; lxxix.13; lxxxvi.17.
2. Ibid. lxxxvi.17.
3. Ibid. xlviii.4; liii.84; liv.53; lxxix.4.
4. Ibid. liii.118; lxxxvi.17; x cv.16.
5. cf Sukranitisara iv.4.48-51, 58-61.
6. BS xliii.14. Stri-Samjnas Taravah.
7. Ibid. viii.2,46; xl.1, 14; civ.47.
8. Ibid. v.41; x.13; xvi.7; xix.12; xxxii.10; xli.2; xlviii.37; c.5. cf Majumdar, G.P., Upavana Vinoda pp. 11-12.
9. Ibid. xciv.13.
10. Amara ii.4.8.

TREES AND PLANTS:

Various kinds of trees and plants mentioned are :

Abhya[1], same as Haritakali and Pathya, Terminalia Chebula, a medicinal herb; Abja[2], Lotus; Agnimatha[3], Aeschynomene Sesban; Ajmoda[4], Apium graveolens, a medicinal herb. Same as Dipyaka; Amalaka[5]; Phyllanthus emblica; Amrta[6], Tinospora cordifolia; Aksa[7], Terminalia beleric. Same as Vibhitaka; Ankola[8], Alangium Lamarkii, a fruit bearing tree; Arjuna[9], Terminalia Arjuna, also known as Kakkubha, a species of the teak tree, which is used for making furniture; Asmantaka[10], Oxalis sp. Bryophyllum Calycinum; Asvakarna[11], The Vatica Robusta tree or Shorea Robusta (?); Asvagandha[12], Withania Somni fera Dunal; Asana[13], Terminalia tomentosa, a gigantic tree also used for furniture; Asvattha[14], Ficus religiosa It is the famous Pippala (Boddhi) tree; Aksata[15], has scented flowers. Another variety is Kalaguru, which grew in abundance in Kamarupa; Arimedaka[16], Achyranthes aspera; Amrataka[17],Spondias mangifera; Amra[18], Mangifera indica is the well-known mango tree;

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1. BS xlviii.30.
2. Ibid. xliii.33; lxx.2.
3. Ibid. xlviii.30.
4. Ibid. lxxvi.11.
5. Ibid. liv.12; lvii.6; lxxvii.3.
6. Ibid. xliv.9.
7. Ibid. xlvii.4.
8. Ibid. liv.50.
9. Ibid. Liv.12,101,105, 119; lxxv.6.
10. Ibid. lxxix.2.
11. Ibid. liv.43.
12. Ibid. liv.105; lxxxv.7.
13. Ibid. lxxvi.9.
14. Ibid. lxxix.2,11,15.
15. Ibid. 2.
16. Ibid. lxxxv.4.
17. Ibid. xxvii.9.
18. Raghu iv.81.
19. BS lxxxv.7; liv.115.
20. Ibid. liv.50; lv.11.
21. Ibid. 119.

Anigna[1]; Atiyala[2], Sida rhombifolia or Abutilon indicum; Atasi[3], Linum usitatissimum; Arka[4], Gigantic Asclepias or Calotropis gigantea. Its milky juice was used in the preparation of unguents[5]; Asoka[6], Jonesia asoka (Saraca Indica), a tree of moderate size belonging to the leguminous class, has large bunches of red flowers. It was a poetical belief that it blossomed only when struck by the foot of a lady, Dobada[7]; Ankhola[8], Hemidesmus indicus; Arishta[9], Azadirachta Indica or Melia azadirachta; Badari[10], Mucuna Pruritus, the jujube tree; Bhallataka[11], Acajou or Cashew-nut; Bakula[12], Mimusops Elengi. The fragrant flowers of Bakul are called Helleborus Niger; Bijapuraka[13], Citrus medica, a citron tree; Bilwa[14], Aegle Marmelos, the wood apple tree; Brihati[15], Solanum indicum; Bhangira[16], Acacia Sirissa; Brahmi[17], Herpestis Monnierria; Bandhujiva[18], Pentapetes Phoenicea or Ixora coccinea; Sinduvara[19], Holoptelia integrifolia; Candana[20], Santalum album or Sirium myrtifolium, the fragrant sandal wood tree; Champaka[21], Michelia champaca; Draksha[22], Vine-grape plant;

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1. BS lixxv 50.
2. Ibid.
3. Ibid. xxix.6; xli.5.
4. Ibid. lxxxv.3; xxix.10; 1.25.
5. Ibid. 1. 5.
6. Ibid. xxxiv.6; xxxvii.2; xliii.33,42; liii.87; liv.119.
7. MU. 15.
8. BS liv.87.
9. Ibid. 105; lv.3.
10. Ibid. 72,74,75.
11. Ibid. 50; xxix.11; xliv.5; lvii.3.
12. Ibid. 119; cf Mbh xii.1283.
13. Ibid. lv.4.
14. Ibid. liv.18,50,76,105; lxxxv.3; lxxx vi.80.
15. Ibid. lxxxv.5.
16. Ibid. 6.
17. Ibid. xlviii.41.
18. Ibid. xxx 8.
19. Ibid. xxix.5.
20. Ibid. lxxix.2,13,18.
21. Ibid. xxix.8; 1.21; lxxvii.6,7.
22. Ibid. lv. 4,10.

Devdara[1], Cedrus libani, variety deodara is the gigantic pine of the Himalayas, found roughly between 5000 and 8500 feet; Dhava[2], Grislea Tomentosa or Anogeissus Latifolia[3], Conocarpus latifolia; Dadima[4], Pomegranate fruit tree, Punica granatum; Gudughi[5], Cocculus cordifolius; Garugavega[6], Herbaceous plant; Dhanya[7], Coriandrum sativum; Dhanvana[8], Grewia tiliaefolia; Gunja[9], Abrus precatorius seeds. Same as Krsnala[10]; Girikarnika[11], Clitorea ternata; Gokshura[12], Tribulus lanuginosus; Guggulu[13], Balsamodendron mukul, popularly sugul; Haridra[14], Turmeric; Haridrakam[15], Yellow sandal tree; Haridraka[16], Curcuma longa; Haritakali[17], Terminalia chibula, medicinal herbs; Hastikarna[18], Butea frondosa or Ricinus communis; Indrutaru[19], Terminalia Arjun; Jaruda[20], Ximenia aegyptiaca; Jambu[21], Eugenia jambolana, commonly known as Jamuna; Jata[22], Hibiscus rosasinensis; Jati[23], Barleria cristata;

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1. BS lxxix.2,15; lxxxv.7.
2. Ford Robertson, F.C., Our Forests, p.10.
3. BS xliii.15; lii.120; liv.106; lv.22.
4. Ibid. lv.4,10; lxxxi.8.
5. Ibid. liv.115.
6. Ibid. 87.
7. Ibid. lxxvii.13,15.
8. Ibid. lxxxviii.9; lvii.1.
9. Ibid. lxxxi.8,11,12.
10. Ibid. 11.
11. Ibid. xliv.10.
12. Ibid. liv.100; lxxvi.10.
13. Ibid. lvii.3,6; lxxvii.9,11.
14. Ibid. lxxix.2.
15. Ibid. liv.46.
16. Ibid. lxxix.16.
17. Ibid. lxxxvi.11, lxxvii.1.
18. Ibid. liv.101; xxix.7.
19. Ibid. 69.
20. Ibid. xxix.6.
21. Ibid. liv.8,87,100,119; lv.4.
22. Ibid.
23. Ibid.

Jivaka,[1] Dendrobium sp. whose wood was good for the Vaisyas; Jyotismati,[2] Cardiospermum halicacabum, a herbaceous plant; Kamillaka,[3] Rottleria Tinctoria; Kakodumbara;[4] Kovidara,[5] Bauhinia variegata, blossoms in autumn, popularly called Kachanara; Kakkola,[6] Guleduga bonducella. It is identical with Naktamala tree (caesalpinia bonducella); Kadamba,[7] Anthocephalus kadamba, blooms in the rainy season; Kapittha,[8] Feronia Elaphantum. Same as Kapista; Kantakya,[9] Species of Solanum viz., Snellia Longifolia, Solanum Jacquini; Kanikara.[10] Pterospermum acerifolium, popularly known as Katha Campa; Karira,[11] Capparis aphylla, a thorny plant; Kadali,[12] Musa sapientum, plantain tree; Kankaka,[13] Barleria Cristata. Another variety is Raktakankaba; Kasmarii.[14] Gmelina arborea; Kasma,[15] Angelica glauca; Khadira,[16] Acacia catechu, having very hard wood, the resin of which is used in medicine, called Catechu, Khayar, Terra japonica; Karavira,[17] Oleander, Nerium odorum having fragrant flowers; Kuranta-ka,[18] Barleria prionites; Khajura,[19] Phoenix sylvestris, date tree;

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1. BS lix.6.
2. Ibid. xlviii.39; liv.87.
3. Ibid. liv.21.
4. Ibid. 19.
5. Ibid. 27.
6. Ibid. 33,102; lxxxv.4.
7. Ibid. 38,78,102,119; lxxix.16; lxxxvi.80.
8. Ibid. 41.
9. Ibid. 53.
10. Ibid. 59.
11. Ibid. 67,74,76.
12. Ibid. 117.
13. Ibid. 119.
14. Ibid. lxxxv,3; lxxix.2.
15. Ibid. 3.
16. Ibid. lxxx vi.80.
17. Ibid. lxxxv.6.
18. Ibid. xliii.33.
19. Ibid. liv.88,101.

Kimmuka[1], Palasa, Butea frondosa; Kalpubha[2], Terminalia Arjuna It is same as the Arjuna tree; Kalikka[3]; Kunkuma[4], Crocus sativa; Kuntha[5], Costus speciosus; Kusumbha[6], Carthamus tinctorious; Kutaja[7], Holarrhena antidysenterica; Lakuca[8], Artocarpus lakuca, Erythrina indica; Nipa[9], Nauclea kadamba; Nirgundi[10], Vitex trifolia, same as Sindivara; Nyagrodha[11], Ficus bengalensis; Parijata[12], Erythrina indica; Patha[13], Stephania hernandifolia; Patira[14], Laurus cassia or cinnamomum inners; Pippali[15], Piper longum; Plaksa[16], Ficus tsiela religiosa; Madana[17], Randia dumetorum, dhatura; Madhuka[18], Bassia latifolia, from which arrac is distilled and oil extracted; Madhuvantika[19], Jasminum zambac; Maga, Mesura ferrea; Mahanaka Shrubera[20] swietenioides; Mahaksara[21], Mesura Roxburgii, same as Punnaga; Nimba[22], Azadirachta Indica, the Neema tree; Nicula[23], Barringtonia Acutangula tree; Naktamala[24], Pongamia glabra or Caesalpinia

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1. Ibid. li.17; liv.119; lx.8.
2. Ibid. liv. 76.
3. Ibid. xxix.2.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid. xxix.12.
8. Ibid. lv.4,10.
9. Ibid. liv. 119; lxxxv.6.
10. Ibid. 14.
11. Ibid.
12. Ibid. xxvii.9, lxxvii.27.
13. Ibid. xlviii.30.
14. Ibid. xli.4.
15. Ibid. xvi.30.
16. Ibid. li.17; liv.119; lx.8.
17. Ibid. lvii.6.
18. Ibid. xxix.4; li.17; liv.38,119; lix.6; lxxxv.3.
19. Ibid. liv.102.
20. Ibid. xliv.10, lxxvii.13; lvii.5.
21. Ibid. liv.113.
22. Ibid. 101.
23. Ibid. 115.
24. Ibid. 119.
25. Ibid. lv. 11.

bonducella, same as Karanja; Nallikera[1], Cocoa-nut; Plasa[2], Butea frondosa or Curcuma zedoaria; Pindara[3], Trevia Nudiflora; Pathya[4], Terminalia chebula; Pannaka[5], Grewia Asiatica or Xylocarpus Granatum, commonly known as Phalasa; Pilu[6], Salvadora indica; Punnaga[7], Colophyllum inophyllum; Pattasa[8], Artocarpus integrifolia; Padmaka[9], Costus Speciosus or Arabicus or Prunus Puddum Roxb; Pippala[10], Ficus Religiosa, the sacred fig tree; Patala[11], Bignonia (Stereospermum) Suaveolens, the trumpet-flower bearing tree; Raja Kosataka[12], Luffa Amara; Sallaki[13], Boswellia Serata; Satavari[14], Asparegus Racemosus; Rohitaka[15], Seveta Rohitataka[16], Andersonia Rohitaka; Lodhra[17], Symplocos Crataegoides or Symplocos Racemosa. Same as Lodhra or the Lodha tree, bearing red or white flowers in winter; Raktataru[18], Red flowers bearing trees viz., Bauhinia variegata Purpureacoma, the Pomegranate tree, Rottleria Tinctoria etc.; Sonaka[19], Bignonia Indica; Saptaparna[20], Alastonica scholaris. It has seven leaves on its stalk.

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1. BS liv.40.
2. Ibid. 17.
3. Ibid. 50.
4. Ibid. lxxvi.3.
5. Ibid. liv.50.
6. Ibid. 63,65,75.
7. Ibid. lv.3.
8. Ibid. 4,11.
9. Ibid. lxxix.2,13.
10. Ibid. liv.96.
11. Ibid. xxix.9.
12. Ibid. liv.121.
13. Ibid. lvii.1.
14. Ibid. xliv.19; xlviii.40.
15. Ibid. liv. 68,73,79.
16. Ibid. 84.
17. Ibid. lxxxvi.80.
18. Ibid.
19. Ibid. liv. 23.
20. Ibid. 29.

It is considered very sacred in the vicinity of Santiniketan and provides ample shade; Sirisa[1], Mimosa Sirisso, a big tree which blossoms in summer, has whitish yellow coloured flowers; Sindhuvara[2], Vitex Trifolia, same as Nirgundi; Simsapa[3], Dalbergia Sissoo; Saka[4], Terminalia Chebula; Sranjana[5], Cugenia Dalbergioides; Sala[6], Shorea Robusta. It was known as Sarja also. Sakhotaka[7], Bilwa tree, the sacred fig tree; Sami[8], Mimosa Suma (Prosopis Spicigera), is supposed to have latent fire in its wood; Sarvarnanama[9], The golden tree may be referring to Cathartocarpus Fistula; Sarja[10], Same as Sala tree, Shorea Robusta; Somalli[11]: Somavalli; Preralia Corylifelia; Singataka[12], Trapa bispinosa; Silaka[13], Clerodendrum phlomoides or Symplocos Racemosa; Tala[14], Borassus Flabelliformis, the palmyra tree or fan-palm producing a sort of spirituous liquor; Tinduka[15], Diospyros Embryopteris or Diospyros Glutinosa; Tinisa[16], Acquatic Plant;

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1. BS liv. 80, lv.3.
2. Ibid. lxxx.6.
3. Ibid. liv.101.
4. Ibid. 105; lxxix.2,13,15.
5. Ibid. 105; lxxix.2,16.
6. Ibid. lxxix.2,17-18. cf Rgveda iii.53.19.
7. Ibid. 2,16; lxxxv.7.
8. Rtu ii.17; iii.13.
9. BS lxxix.21.
10. Ibid. lxxxv.6; liv.81,83.
11. Sak. iv.3; Raghu iii.9.
12. BS liv.70.
13. Ibid. xliv.4; liv.105; lix.6.
14. Ibid. 80.
15. Ibid. liv. 108.
16. Ibid.
17. Ibid. liv.37,50,115; lv.11.
18. Ibid. 40,119.
19. Ibid. 50,118, 115; lxxix.2,15.
20. Ibid. lv.11.

Tamala[1], Cinnamomum Tamala; Tila[2], Sesamum Indicum; Udumbara[3], Ficus Glomerata; Vibhitaka[4], Terminalia belerie; Vata[5], Ficus Bengalensis. Same as Nyagrodha; Vacha[6], Acorus Calamus; Vetasa[7], Calamus Rotang or Calamus Viminalus; Vanjula[8], Salix Tetrasperma; Vanira[9], Saccharum. Munja or Calamus Roxburghii[10]; Vasaka[11], Adhatoda Vasika; Vaikantaka[12], Flacourtia Sapida or Gymnosporia montana; Varunaka, Crateava Roxburghii; Vardhamana[13]; Vidarika[14], Ipomoea Digitata;.

GRASSES

The various grasses mentioned are :

Akshira[15], Darbha Poa Cynosuroides; Sundra[16], Saccharum Sara; Kasa[17], Saccharum Spontaneum or Cylindricum; Kusa[18], Poa Cynosuroides; Kula[19]; Munja[20], Saccharum Munja or Sara; Malai; Mallika[21]; Usira[22], Andropogon Laniger; Rekha[23], Cynodon Dactylon; Virana[24], Andropogon Muricatus.

CREEPERS

The creepers mentioned are :

Arkka[25], Ipomoea Turpethum; Murava[26], Sanseviera Roxburghiana or bow-string hemp; Sinduvari; Sariva[27], Hemidesmus Indicus.Sano

1. RS xxi.23.
2. Ibid. lv.11.
3. Ibid. 10, liv.11,18,96; lxxxv.4.
4. Ibid. liii.118; liv.24,26,102.
5. Ibid. liv.96,119; lxxxv.3.
6. Ibid. xvi.30; xlviii.39; lvii.1.
7. Ibid. liv.101,119,124.
8. Ibid. 50.
9. Ibid. lv.10.
10. Ibid. lxxxv.7.
11. Ibid. 8.
12. Ibid. liv.50.
13. Ibid. lxxix.21.
14. Ibid. lxxvi.9.
15. RS liv.100.
16. Ibid.
17. Ibid. 103.
18. Ibid. 37,77.
19. Ibid. 100.
20. Ibid.
21. Ibid.
22. Ibid.
23. Ibid. cf Sak p.84.
24. Ibid. 37,47,77-78.
25. Ibid. 47.
26. Ibid.48,87.
27. Ibid. 87.
28. Ibid.
29. Ibid.

as Asphota; Śiva,[1] Phyllanthus emblica; Śyāma,[2] Rohnocarpus Frutescens; Vikaṅkaṭa;[3] Yavanāl,[4] a kind of bulbous plant, Dioscorea; Jyotiṣmati,[5] Cardiospermum Halica Cabum; Gavākṣaka,[6] ; Śukanāsa,[7] Mimosa Pudica; Mahāpañcāṅgulī,[8] Glycine Debilis; Vyāghrapadā,[9] Aṅkuśatikā;[10] Dantī,[11] Baliospermum Axillare; Śukavāṭadi,[12] A Herbaceous plant; Lakṣmaṇā;[13] Mayūrśikhā,[14] A Jasminium species; Śārṅgavalli,[15] Gynandropsis Pentaphyalla; Atimuktaka,[16] Agamosma Caryophyllum, popularly known as jasmine; Priyaṅgu,[17] Aglaia Roxburghiana is very much favoured by Sanskrit poets and is compared with the body of a woman on account of its delicacy.[18] It has white flowers and is supposed to blossom at the touch of a woman.[19] Prāksā.[20] Vine creeper from which the wine is prepared.

Plants, trees and forests play an important role in the economic life a nation. They provide timber for furniture and industry, firewood for house-hold purposes, fodder and raw material for oils, tans, dyes and other products of economic wealth. In addition they conserve soil and preserve wild life.

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1. RS liv. 87.
2. Ibid. lxxxv.6.
3. Ibid. RSx liv.87.
4. Ibid. RS.
5. Ibid.
6. Ibid. RS.
7. Ibid.
8. Ibid.
9. Ibid.
10. Ibid. 109.
11. Ibid. 48.
12. Ibid.
13. Ibid.
14. Ibid. of Sak. p. 31.
15. Ibid. iv. 22.
16. Ibid. 5.
17. Ibid. 3; lxxxv.7.
18. Rtu iv.10; vi. 12.
19. MU 41.
20. RS iv.4,10.

ANIMAL LIFE: The terminology of the classification of the animal life is also very exhaustive. It may be classified in general as diurnal, nocturnal, diurnal-nocturnal, atmospheric, terrestrial, acquatic, rural or urban and wild.[1] Another classification was based on the gender into male, female and hermaphrodite.[2] But Varahamihira does not approve of this classification for it is difficult to ascertain the sex of creatures. Animals were also classified according to their food habits, distinguishing limbs, size and general habits. Under the first category we have Kravyad or Carnivorous;[3] Trnabhuj or eaters of grass;[4] creatures subsisting on water, and grains;[5] in the second classification, mention may be made of Damstra i.e., animals with prominent teeth like the boar, dog and serpent;[6] Uparidamstra, animals with teeth above like the boar;[7] Srngin, horned animals like the deer;[8] Ekaspha or animals with unclovan hoofs like horses and asses;[9] according to size, as Ksudra-Jantus;[10] and according to general habits, as Sarisrpas, reptiles or Sighraga, moving fast like the camel.[11] Birds and wild animals are also distinguished from one another: Khaga-Mrga,[12] Paksi-Mrga,[13] Patatri-Mrga,[14] Mrgamdaja[15] [16]

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1. BS lxxxvi.6,10,24; xlvi.65; xlv.65; xcv.58; iv.5; v.33; xv.2; xvii.24; xxi.23; lv.5; xcvi.5.
2. Ibid. 6.
3. Ibid. xlx.3; lxx.22; lxxi.12.
4. Ibid. v.30.
5. Ibid. lxxxi.67.
6. Ibid. v.93; vi.3;viii.51; xix.1; xxxiv.9; lxxxvi.44.
7. Ibid. xcv.57.
8. Ibid. xvi.8; civ.61.
9. Ibid. v.78; lxxxvi.23.
10. Ibid. xi. 45.
11. Ibid. xxix.13; lxx.22.
12. Ibid. v.64.
13. Ibid. iii.38; xv.13; xlviii.13.
14. Ibid. xxx.16; xxiv.12; xlvi.91,94.
15. Ibid. xxiv.25.
16. Ibid. xxxi.5; lxxxvi,43.

and Vihanga-Mrga[1] and so are the borrow-dwellers done from the tusked animals[2] and the tiger, bear, monkey, leopard and buffalo.[3] Another mode of classification and distinction was the names bearing as masculine and feminine.[4]

Caraka mentions four primary divisions of animals[5] based on the mode of reproduction. Susruta gives a similar classification only with a slight difference in order. Elsewhere Caraka[6] classified the creatures according to the food habits and living also.

The fauna described by Varahamihira in his works can be studied under the following modern classification.

Vertebrates: The mammalia family constitute the highest group amongst vertebrates.[7] The monkeys which have been referred to at many places, are found all over India. Amongst the man-like apes only the hoolock gibbon is found in the dense forests of Assam. The pouched mammals such as kangaroos and the opossum are not found on the subcontinent of India.

Amongst the various groups of land carnivorous (krvyad)[8] are mentioned, the lions (Simha,[9] Mrgesvara,[10] Matangaja[11]) which are at present restricted to the forests of Kathiawar

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1. BS iii.7; xlv.66; xcvii.7.
2. Ibid. lxxxvi.44.
3. Ibid. 28.
4. Ibid. 36-37. For enumeration of creatures with feminine names, see Parasara cited by Utpala (lxxxv.36-37).
5. Sariraathana ch. iii.
6. i.27.35-55.
7. BS lxxxvi.28,38.
8. Ibid. lxx.22.
9. Ibid. xliii.13,57; lxviii.103.
10. Ibid. lxii.1.
11. Ibid. lxvi.2.

Peninsula and the tigers (Vyaghra)[1] are widely found throughout India in e snowy mountains, in the ever-green forests and dry open les as well as in other swamps of the Sunderbans. The leopa (Dvipi)[2] i.e., the Cheetah and the bears (Arksa)[3] are the o er large carnivorous.

The other carnivorous include the wolves (Vrika)[4] jackals, (va)[5] etc. Among smaller carnivorous of the cat-groups are the various forms of cats (Vidala)[6], the mangooses (Nakula)[7] te. The odd-toed forms of the hoofed mammals include the horse, the ass, the rhinoceros and the elephant, and the even-toed re the cattle, sheep and goats, deer, gazelle,[8] and antilo , the boars and pigs. The rhinoceros which are found only in Assam and the swamps and grassy jungles of low hills in p rts of Nepal are the wild beasts. Four kinds of elephants[9], wild as well as domesticated for the use in the army viz., Bhadra, Manda, Mrga and Misra are mentioned by the ast er. The elephant caves (Kunjaradari)[10] are said to have n situated somewhere in South India. There are numerous r ferences to elephants' tusks (Hasti-Danta).[11] The

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1. BS l .28; xxiv.15; li.19; lxviii.17,37,103.
2. Ibid. l .28.
3. Ibid. l 1.1; lxxxvi.21,28.
4. Ibid. l .22; lxxxvi.27.
5. Ibid. ii.24; xxx.30; xlvi.63,68; lxviii.4; lxxi.12; lxxxvi. 1,37; ch. xc (full); xcvii.9.
6. Ibid. l .22,65; ix.40; xxvii.5.
7. Ibid. v. 32,71; lxxxvi.41,43.
8. XX vii. 12.
9. BS lxvi . 1-10.
10. Ibid. v.16.
11. Ibid. v. 1 ff.

Airavata[1] elephant is also mentioned. The horse (Asva)[2] was an important animal in ancient times for war as well as transport. It was the swiftest ride before the emergence of the machines. The ass (Khara)[3] and the mule (Vesara)[4] are also mentioned, as domesticated animals.

Among the even-toed domesticated animals may be mentioned the cow (Go)[5], Buffalo (Mahisa)[6], the acquatic bull (Vrsajala)[7], the bull (Vrsa)[8], goat (Aja)[9], sheep (Avika)[10] and calf (Vatsa)[11]. The even toed wild beasts comprise the deer (Kuranga)[12] including the other kinds namely the Ruru (spotted deer, whose skin was considered sacred)[13], Rohita[14], Dhikkara[15], the antelope (Mrga)[16], the boars (Sukara[17], Kroda[18], Varaha[19]).

Among the rodents references to rat (Akhu)[20], Porcupine (Salyaka)[21] hares (Sasa)[22] Chuchhu[23], a king of rat probably rabbit

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1. YY vi.2.
2. BS v.41;65,72; vii.6; ix.43; x.3; xi.4; xv.13,19,26; xvi.8, 23,27; xix.3; xxxii.10; xciii.(whole) etc.
3. Ibid. xxxii.9; lxi.2; liv.106,109. 4. Ibid. lxxxvi.66.
5. Ibid., xv.2; lxi.2-4.
6. Ibid. lxxxvi.28; ix.40; xvi.34; xli.3 etc.
7. Ibid. xv.2.
8. Ibid. lxi.5,7-9 ff; xxiv.35; xlvi.85 etc.
9. Ibid. xxix.7; xxxix.2; xlv.8; lxv.(whole); lxxxvi.41; 80. etc.
10. Ibid. xxix.7; xxxix.2; xlv.8; li.34; x li.6, lxi.16; lxxxv.80.
11. Ibid. xlvi.56; xlviii.11.
12. Ibid. lxxxvi.23,26.
13. Ibid. lxxxvi.48.
14. Ibid. lxxxvi.26.
15. Ibid. 38.
16. Ibid. lxi.12; lxxxvi.23,26,48.
17. Ibid. ix.40; xxx iii.9; xliii.54; lxviii.104.
18. Ibid. xxxvi.42.
19. Ibid. lxxxi.23,29.
20. Ibid. liv.20; lxxxvi.23,65; xcv.4; xlviii.16; viii.4.
21. Ibid. lxxxvi.23.
22. Ibid. 23,26,42; lxxxviii.22.
23. Ibid. 37.

and Chuchundari and Nripsuta[1] (smelling rats) are found. The following kinds of reptiles have been recorded by the astronomers: Lizard (Godhika or Grhagodhika)[2]; and its male counterpart; brown lizard (Kapila Godha)[3]; white-lizard (Sveta Godha)[4]; tortoise (Kurma)[5]; snake (Sarpa)[6] and its other varieties namely white-snake(Sita Ahi)[7], lotus-calix coloured snake (Kamalodra Bhujaga)[8], Ahiraja (big serpent)[9], spotted snake (Karburaka Ahi)[10], blue snake (Nila Bhujaga)[11] and white and dark snake (Silosita Bhujaga)[12] and crocodile (Makara)[13].

The batrachians (Manduka)[14] include the frogs and toads which are common throughout India in ponds and muddy and damp places. Other types of this family which find mention are the green frog (Harita Manduka)[15] and the gold-hued frog (Kanakibha Manduka)[16].

The fishes of innumerable varieties[17] including the red-fish (Rohita-Matsya)[18] are mentioned. The whales, Timi,[19] and the Timingalagana[20] i.e., whale eaters are also referred to as living in the southern division of India. The leech, Jahaka,[21] is also mentioned.

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1. BS lxxxviii.5.
2. Ibid. xxxiii.9; ii.35; iiv.13,16; lxxxvi.37,42.
3. Ibid. liv.69.
4. Ibid. lv.15,16.
5. Ibid. i.22; liii.90; liv.24,44; lx iv.1-3; lxx.3; lxvii.6,7.
6. Ibid. xvi.34; xvii.25; xix.9; xxv.3; xxviii.7; xxxii.9,28; xliii.57,65; lxxi.12; lxxxi.25,27,29; xcv.35; xcvii.7 etc. cf Susruta Kalpasthana ch.iv.
7. Ibid. liv.11.
8. Ibid. 28.
9. Ibid. 36.
10. Ibid. 42.
11. Ibid. 46.
12. Ibid. 66.
13. Ibid. xxviii.14; xxxii.9; lxviii.48.
14. Ibid. xxiv.19; xxvi.6; xxvii.4; liv.8,30,39,63,67.
15. Ibid. liv.30.
16. Ibid. 39.
17. Ibid. v.41; xxviii.4,14; xxxii.10; lxxxvi.65; lxxxvii.7.
18. Ibid. liv.15. 19. Ibid. lxxxi.1,23,29.
20. Ibid. xiv.16. 21. Ibid. lxxxvi.42.

BIRDS: As an expert of the natural sciences, Varahamihira[1] gives a vivid picture of the bird life. The peacock, restless lover of the clouds, has been referred to with its different names of Mayura[2], Sikhi[3], Barhi[4], along with its Sikhikantha[5] (tail), shining like a flame of a lamp. The cuckoos include several forms and all lay eggs in the nests of other birds[6]. The Koel, Kokila, the Indian Cuckoo, also known as Syama[7] because of its black colour, frugivorous in habits, is commonly found in India from March to July. The male is glossy black and the female brown and spotted (nearing grey). The Koel lays eggs in the nests of the crows[8]. The male species is called Pumsakokila[9]. Cataka, Cuculus melanoleucus, is also a kind of cuckoo supposed to drink only the water of the clouds[10]. The Greek patridge of the genus Tetraoperdix is Cakora[11], a smart bird with a well-set head and prominent reddish eyes and legs. It is generally found in pairs after the rains in the new green swards in the tropics. Sarika[12] or the maina (mayna), Garcula religiosa, is a familiar bird, commonly found in India. Its voice sounds like 'Krakra' or 'Tretra'.

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1. MP 32; Rtu. 1.16.13.
2. BS xxvii.14; lxxxvi.6.
3. Ibid. lxxxvi.20,38; lxxxviii.1.
4. Ibid. 41.
5. Ibid. lxxxii.5.
6. Ibid. lxxxvi.23,26.
7. Ibid. lxxxvii.1,14.
8. Ibid. xliii.7.
9. Ibid. xxviii.14; lxxxvi.27.
10. Rtu.ii.3.
11. BS lxviii.5.
12. Ibid. lxxxviii.30.

The pigeons 'Kapota'[1] consist of three kinds viz.,[2] Apandura (grey pigeon), Citra (Variegated) and Kumkumadhumra (saffron coloured). Another type Paravata[3] may denote the dove (turtle dove).[4] According to Varahamihira, Kapota and Syama are identical.[5] Suka is the common parrot, very familiar bird.[6] Harita, according to some, is a kind of pigeon and according to others, parrot.[7] But they seem to be different birds. Its sound is 'guggu'.[8] Garuda, kingfisher, the enemy of the serpents, has a beautifully coloured plumage and is the vehicle of God Visnu.[9] Grdhra is the vulture.

The most familiar bird is the crow, Kaka,[10] found around the human habitations, and the domesticated cock, Kukkuta,[11] along with its two types mentioned namely the Gartakukkuta and the Kulalakukkuta (potter's cock) which has the sound of 'kili kili'.[12] Krikavaku[13] is also a kind of cock which has a sound of 'kukukuku'.[14]

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1. BS lxxxvi.21; lxxxvii.1,12.
2. Ibid. lxxxvii.13.
3. Ibid. liv.10.
4. Ibid. lxxxvii.5.
5. Ibid. xxvii.14; lxxxvii.1,11; xlviii.6.
6. Ibid. xlviii.6; lxxxvii.1,15.
7. Ibid. lxxxvii.1.
8. Ibid. xi.62.
9. Ibid. lxxxvii.1.
10. Ibid. lxxxvi126; lxxxvii.1,24; xcv. whole.
11. Ibid. lxxxvii.1.
12. Ibid., 8.
13. Ibid. 22.
14. Ibid. xlviii.6; lxxxii.7.

Other common birds found in the habitations are Cataka[1] (sparrow) and Catika[2] (she-sparrow) which is also called Sukarika.[3] The owls, Uluka[4] and Valguli[5] are both nocturnal in habit. They feed on various small animals particularly the squirrels, rats and mice. The owl is associated with Laksmi. Owl's call for mating is Hun-Hun-Ongluk and for quarrel is Balabala and Tatattata.[6] The prey birds include the vultures Grdhra,[7] the kites, Kanka;[8] the hawks, Syena[9] and Sakuni,[10] fowl and Tittara,[11] patridges and Tittari,[12] she patridges which has a sound of Kilikilkili.

The most noisy birds are those of the magpies, beautifully coloured birds usually found in the forests and in the big gardens. Besides the parrots which have been described already, Satapatra[13] or the woodpecker which has a long bark and rotten wood from tree trunk, exposing termites, ants, beetles and their larvae on which it feeds, the blue jay or roller, Casa,[14] is one of the best known Indian birds seen in gardens and orchards. With the end of winter it rolls in the air and with harsh screams declares the advent of the spring. It has a sound of Ke Ka and Kre Kra.[15]

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1. BS lxxxviii.1-7.
2. Ibid. 9.
3. Ibid.
4. Ibid. 8.
5. Ibid.
6. Ibid. 26.
7. Ibid. lxxxvi.38.
8. Ibid. lxxxvii.11.
9. Ibid. 1,11; lxxxvi.38.
10. Ibid. lxxxvi.31.
11. Ibid. xxvii.17; lxxxvii.7.
12. Ibid. lxxxviii.21.
13. Ibid. lxxxvi.23; xlvii.6.
14. Ibid. xlvii.6; lxxxvi.23,43,48; lxxxviii.1,23-24; xxii.14.
15. Ibid. lxxxvii.25.

Besides there are aequatic birds, Jalakhagana - [1]
Hamsa, [2] Swan and flying swans. [3] Amongst the cranes, the well-
known form Saras [4] and Karandava, [5] a duck and Kurara [6]. In
addition to these birds we have Purnakuta (Bhasa), Kutapurt, [7]
Kurabaka, and Karayika. [8] Ulukoti (Pingalika), Pecika, Hakka,
Rala [9] (Srotabhedya i.e., stream cutter), Tadagabhedya, i.e.,
bank cutter, Ekapatraka, Kalahakarika, Durbalika [10] (Khandika),
Phenta [11] whose voice is like Cirilu Irilu, Srikarna, [12] Bharadhvaja, [13]
Andiraka, [14] Jiva, [15] Jivaka, [16] Krakara, [17] Kapinjala, [18] Vanjula [19] (Khadiracandu)
Khanjanaka, [20] Srikantha, [21] Divyaka, [22] Khanjarita, [23] Pippika, [24] Naptrika, [25]
and Kraunca (a kind of the heron, large screa-ming water-fowls, [26]
with long neck and legs).

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1. BS xlviii.8.
2. Ibid. lxxxviii.3.
3. Ibid. xlviii.9-10.
4. Ibid. 9; lxxxviii.3,37.
5. Ibid. 9.
6. Ibid.
7. Ibid. lxxxviii.4.
8. Ibid.
9. Ibid. 6.
10. Ibid. 7.
11. Ibid. 26,31.
12. Ibid. 27; lxxxvi.38.
13. Ibid.1,15.
14. Ibid. 1,25.
15. Ibid. xlviii.6.
16. Ibid.
17. Ibid.
18. Ibid.
19. Ibid. lxxxviii.1,5,11.
20. Ibid. 20.
21. Ibid. xlviii.6; lxxxvi.38.
22. Ibid. lxxxviii.18.
23. Ibid. 1.
24. Ibid. lxxxvi.38.
25. Ibid. 49.
26. Ibid. 27.

INVERTEBRATES: The invertebrates constitute the less-known forms of animal life.[1] The conch-shells, Sankha, of the gastroped shells animal family, are associated with sacred rites of the Indians[2] and are a source of pearls.[3] However, the pearls produced by the pearl-oysters, Sukti were considered to be the best.

Amongst insects belonging to the arthropod group are the ants, Pipilika[4] (the ant hills, Valhika)[5], glow-worms, Khadyota[6] and the locusts (Salabha)[7]. The various kinds of honey bees, Ali,[8] the smaller variety - Madhu,[9] Bhramara,[10] Dvirepha[11] - along with the bee-hive, Madhunilaya[12] and bees wax, Madhuchistani[13] are mentioned.

The scorpions (Vrschika)[14] belong to the peripatus family, a form intermediate between the arthropoda and the segmented family. Of the segmented family the leech, Jahaka[15] is mentioned.

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1. BS xvi.7; xiv.14; xv.25; xlii.10.
2. Ibid. lxxxi.1,29.
3. Ibid. l.
4. Ibid. xxvii.7; xcv.59.
5. Ibid. xxxv.7; xlii.13; xlxi.70; liv.9,12,14,16,19,24,25, 27, 29, etc.
6. Ibid. xxvii. 23.
7. Ibid. viii. 4.
8. Ibid. xix.4.
9. Ibid. xliii. 63; liv.107; lxxix.3; lxxx.15 etc.
10. Ibid. lxxxii.1,5.
11. Ibid. xlviii.7.
12. Ibid. lix.3; xcvi.8.
13. Ibid. xvi.25.
14. Ibid. liv. 73.
15. Ibid. lxxxvi. 42.

CROPS:[1] Two main harvests viz., summer[2] and autumn and a third intermediary[3] called the vernal harvest were sown in a year, the former two corresponding to the Kharif and Rabi crops of the modern times. The first one was sown in winter and ripened in the months of April-May of the summer and the latter was sown in the rainy season and raised in the season of autumn. It is surprisingly corresponding to the accounts of the Greek classical writers.[4] Two crops are also implied by the terms Purvasasya and Aparasasya[5] corresponding to autumn and summer harvest, which are again somewhere referred to as Prathem-jata and Pascadupta.[6] The three-harvest theory corresponds to the Arthasastra[7] which refers three crops namely the Purvavapa, Pascadvapa and Madhyavapa.

It is very surprising that Varahamihira refers to two harvest so often that we are led to believe that during the times of Varahamihira there were only two main crops and not three as is the case in the present times. Undoubtedly, there were two main staple crops consisting of wheat and barley in the first category and paddy and rice in the latter category.[8]

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1. BS viii.47; ix.43; xxv.2; xxvii.1 (spurious) xl.1-3.
2. Ibid. v.21,27,78,90; ix.42; x.18; xv.15; xxv.2;xxvii.1; xl.1.12,14; xli.3; xcv.4.
3. Ibid. xxvii.1.
4. Cf McC Meg p. 54. Eratosthenese says 'India is watered by summer rains, and the plains are over-flowed. During these rains, accordingly flax is sown and millet, also sesamum, rice and bosmorum (?) and in winter time wheat, barley, pulse and other excellent fruits unknown to us". Ibid. p. 55.
5. BS viii.13.
6. Ibid. xl.9,
7. ii.24 p. 116.
8. The autumn crop reaped in Kashmir is referred to by Kalidasa which consisted of only rice, Sali - Raghu iv.20.

The third corp, it seems, was not staple which consists mainly of beans, pulses, and vegetables. The third crop which is sown and raised almost in the corresponding months of the summer harvests, loses its entity for also being not staple. The study shows that there had been no change in the harvests of India at least from the times of the Alexander downwards.

STAPLE CORNS: Rice is grown in the regions of heavy rain fall. These areas are not specifically mentioned by our astronomer but without being specific, he speaks in general terms about the regions that are endowed with paddy fields.[1] It is a Kharif harvest. Rice at present is grown mostly in the Assam, Bengal, Orissa and the coastal regions of Gujarat, Maharastra, Kerala and Madras. It is the staple food of South and East India. It is relished as an extra dish in the Utter Pradesh Madhya Pradesh and the Punjab.

As many as seven varieties of rice were known to our astronomer to have been cultivated during his time. Among them are:[2] Sali,[3] Kalama,[4] Sastika,[5] Rakta,[6] Pandaka,[7] Sukaraka[8] and Gaurasali.[9] Kalidasa refers to three other varieties, of which Sali,[10] is said to be the most nourishing grain. It was

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1. BS iv.30; viii.30; xix.16; Raghu iv.37 refers to the paddy fields of Bengal.
2. Ibid. viii.30; xv.6; xix.6,16. cf Raghu iv.20; Rtu iii.1,10, 16; ix.1,17,18; v.1,16.
3. Ibid. xix.6, xxix.2; cf Raghu iv.37.
4. Ibid. xxix.2; ii.30; lxxvi.8,9.
5. Ibid. xxix.2.
6. Ibid.
7. Ibid.
8. YY xii.4. cf Caraka i.27.8.
9. Kalidasa refers to other varieties such as Nivara (Raghu i.50; v.9; Sak.1; ii.); Unchha paddy (Raghu v.8); Syamaka paddy (Sak.iv.)
10. Saradhanyam, Utpala xv.24.

replanted[1], which is locally known as Jadahan. Replanted paddy is always superior in yield and quality to that of growing directly. Kalamasali is a variety of white rice which is sown in May and June and ripened in December or January.[2] According to Utpala[3], it was one of the best varieties of rice. Gaurasali seems to be more or less of the same variety. Sastika heads the list of three varieties. It is called Rajadhanya[4] by Utpala. It is the quickest crop ripening in sixty days.[5] Hiuan Tsang also refers to this variety.[6] Raktasali rendered as oryza sativa[7] is regarded the best variety of rice by Susruta[8] and Caraka.[9] Nispava is a confused term meaning according to some Sali and to others leguminous seeds, as pointed out by Utpala.[10]

Wheat (Godhuma)[11] is a rabi crop. It is grown in the Punjab, Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan. It is the staple food of roughly the Aryavarta excluding Bengal and Orissa. Other cereals cultivated in our period were barley (Yava)[12], Kangu or Priyangu[13] (Panic seeds)[14] and Kodrava[15]

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1. Raghu iv. 37.
2. Monier Williams 'Dictionary under Kalamasali'.
3. Uttamadhanya, Utpala xv.5; Sobhanadhanya Ibid.10; Dhanyavara Ibid. xix.6.
4. Ibid. xiv.12. Rajopayogiyad dhanyam Sastikadi.
5. cf Caraka 1.27.13; Susruta 1.46.3.
6. Watters i. p. 300.
7. Monier Williams, Dictionary.
8. Caraka 27.3.11; Susruta 1.46,4,6.
9. BS xvi.34; xli.3; lxxix.33.
10. Utpala xi.5. cf Monier Williams, Dictionary.
11. BS xv.6; xvi.7; xix.6; xxix.4; xli.2,3,5.
12. Ibid. vii.30; xv.6; xvi.7; xix.6; xxix.3,4; xli.2,3; xliv. 11; xlvi.33; lxii.2; lxx.2; lxxx.10; lxxxvi.4; BY xvii.6.
13. Ibid. vii.10; xxix.4.
14. BY iv.23-24.
15. BS xxix.6; xli.4; lxxvi.2.

(paspalam scrobiculatum). Kudhanya[1] and Ksudhradhanya[2] are the terms denoting these cereals which imply that the grains of these crops were probably taken by the poor people.

SUGAR CANE: Cultivation[3] of sugarcane was very popular among the agriculturists of Varahamihira's India as is evident from the numerous references in his texts. The vastness of the area[4] suitable to sugarcane plantation[5] can be testified by references such as iksuvana and iksuvata. The sugarcanes were[6] an autumnal crop which was raised in winter alongwith rice.[7] References to sugarcane and rice fields lying in contiguity[8] with each other[9] are mentioned. Both sugar (refined) and jaggery[10] (raw) were prepared from the sugarcane syrup.[11]

OIL CROPS: The oil crops known to have been under cultivation were[12] Tila[13] (sesamum), Sarsapa[14] (mustard) and Sita-sarsapa or Siddhartha[15] (both meaning white mustard seeds). Mixed sesamum[16] are also mentioned.

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1. BJ viii.18. cf Utpala.
2. Utpala BS xxxiv.15.
3. BS viii.30; xv.6; xix.6,16; xxix.18; xli.6,7; xliii.57; civ.61 b, 63a; cf Amara iv.164 p. 122.
4. Ibid. xv.6.
5. Ibid. xix.6.
6. Ibid. civ. 63 a.
7. cf Rtu v.1.
8. BS viii.30; xix.16 cf Raghu iv.20.
9. Ibid. lxxvi.6; lxxvii.11; BJ viii.13.
10. Ibid. vii.4; x.8; xliii.38; lxxvii.10,16; cv.8; BJ viii.13.
11. Ibid. x lii.5. cf Amarakosa ix.43, p.209; iii.42, p.279.
12. Ibid. v.75; xv.14; xvi.37, xxv.2; xxix.4; xli.6; xlvi.35; xlviii.30,35,77; li.31; lv.2,7,17; lxv.6; lxxvi.7,9; BJ viii.13.
13. Ibid. xxix.5; xli.5; xlvi.24; lxxxvii.4. Sesamum seeds yielding only half the quantity of oil or no oil at all were a bad omen forboding great impending danger.
14. Ibid. lxxx.18.
15. Ibid. xliv.5; xlviii.35.
16. Ibid. lxiv.6.

BEANS AND PULSES:[1] Under the Samidhanya come the various types of pulses, beans, peas and lentil. They are the secondary crops which ripen more quickly[2] than the staple crops. They are also known as cash crops. They are as follows:
Mugda (Phraseolus Mungo)[3] is commonly known as green gram or Munga in vernacular. Masa[4] (Phraseolus Radiatus) is commonly known as black gram.[5] Canaka (chic k pea) or Bengal gram, Masura[6] (Ervum Hirsutum) i.e., lentil, Kulatha[7] (Dolichos uniflorus)[8] or horse gram, Kalaya (leguminous seed).

FIBROUS CROPS: Cotton,[9] hemp[10] and linseed[11] or the common flax are among the fibrous plants cultivated during our period, which were used to manufacture various types of cloths.[12] Spices such as long-pepper,[13] cardamoms,[14] cloves,[15] areca nuts or betal nuts,[16] ginger,[17] turmeric,[18] saffron,[19] camphor,[20] everrhoea,[21] small cardamons[22] were produced. Pepper is also mentioned.[23]

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1. BS viii.10.
2. Ibid. 8.
3. Ibid. v.75; xv.14; xxix.5; xli.5.
4. Ibid. x v.14, xvi.37; xxv.2; xxix.4; xli.5; lxxvi.8; lxxviii.3; lxxxvii.22; xciv.21.
5. Ibid. xv. 14; xvi.3; xxix.5; BY xviii.3-5.
6. Ibid. xli.2.
7. Ibid. xxix.5; xli.5; liv.36,114; lxxxvii.22,xcv.21;BY iv.23-27.
8. Ibid. xli.5.
9. Ibid, v.75; xv.9,14; xxix.5; xli.3; xcv.15. cf Amara p.209.
10. Ibid. xxix.6. cf Amara p. 204.
11. Ibid. xxix.6; xli.5; lxxxi.7.
12. cf Amara iv.33,41,46,55,74,76,95,97,125-26,134,160,170, pp. 88-124.
13. BS li.15.
14. Ibid. xvi.25; lxxvii.12.
15. Ibid. xxvii.4; lxxvii.37.
16. Ibid. lxxvii.36; lxxxvii.2.
17. Ibid. li.15; lxxvi.11.
18. Ibid. xliv.9.
19. Ibid. x.11, xxix.9; xlii.10, l.21.
20. Ibid. lxxvii. 11,12,15,16,27; lxxxi.28.
21. Ibid. xxvii.4.
22. Ibid. xxvii.4, lxxvii.32-33.
23. Ibid. li.15; lxxvii.32-33. cf Raghu iv.46-47; Cosmas calls Southern part of India as the pepper countries (xi.p.364).

Cultivation of vegetables besides the regular cereal crops was undertaken.[1] The vegetable shops selling solely vegetables and fruits are mentioned.[2] Sale of fresh roots (i.e. wild vegetables)[3] and fruits is also referred to.[4] Fruits such as Jambu (rose apples)[5] jujube,[6] mangoes,[7] plantain,[8] lemon,[9] pomegranate,[10] grape wine,[11] jack,[12] palm,[13] coconut and dates were grown in the gardens or were wild and collected for the purposes of sale.

Aquatic fruits were also known.[14] Meals consisting of leafy vegetables were not favoured.[15] Fodder is also mentioned.[16]

Animals products referred to are (chowries)[17] fly-whisk, pearls,[18] corals,[19] conches,[20] and conch-shells,[21] silk

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1. BS xlii.3.
2. Ibid. xxix.4.
3. Ibid. 5.
4. Ibid. 11. cf Raghu iv.69; vii.21; Rtu vi.1,3,15,22,27,30 and 34.
5. Ibid. iv.4.
6. Ibid. 10.
7. Ibid.
8. Ibid.
9. Ibid.11.
10. Ibid. xxvii.3; li.14; liv.40 cf Raghu iv.34.
11. Ibid. xli.4.; liv.40. cf Ibid. 38,42.
12. Ibid. liv. 58, 101. cf Amara iv.38,61,65,108,113,169, 170 pp. 90-124.
13. Ibid. xv.26.
14. Ibid. lxxvi.12.
15. Ibid. xc iii.9.
16. Ibid. lxxi (full); cf lxiii.1; lxxiii.1.
17. Ibid. vii.6; xiv.14; xv.25; xvi.7; xxi.23; xxix.6,9; xli.8; xlii. 6,10; xliv.27; liv.110; lvii.47; lxxii.2; lxxx.6; lxxxi.(full).
18. Ibid. xvi.14; xxix.8; xlii.10; li.37; lxxx.5.
19. Ibid. lxxx.5; lxvii.45; lvii.33,36; xliv.16; xlvii.49; vii.6.
20. Ibid. xvi.7; xiv.14; xv.25; xxix.6; xlii.10; lxix.17,24; lxx.10; lxxxi.1,28; lxxxvi.23,30.
21. Ibid. xvi.30; lxxxvii.19.

wool, bones, ivory, horns, musk (Mrga, Kasturika).

References to medicinal herbs are very numerous which were grown or collected from the forests viz., Vidharika, Kapikachhu. For the preparation of dyes and scents, we have indigo, cassia-bark, costus, Renuka, Nalika, Nagakesara, Tagara, Sprikka, Valaka, Patra, madder, Nakhi, nutmeg, coriander, Sihla, Priyangu, Sandal, Karpura, Aguru, resin, Musta, Sarja-juice, andropogon and various types of flowers.

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1. BS xvi.30.
2. Ibid. ix.25; xlv.9; xlvi.40,71; xlviii.16; li.8,14,29.; liii.60; lxvii.96,99; lxxix.1,13; xcv.12,39,40.
3. Ibid. xxvi.8; lxxix.19.
4. Ibid. l.25; lxi.2,7,11,17,18; lxv.4,11; lxvii.9; iv.8-11, 14-17; xlvii.16.
5. Ibid. lxxvii.12,27.
6. Ibid. 16.
7. Ibid. vi. 41; x.18; xvi.7; xix.12; xxxii.10; xli.2; xlviii.37; c.5.
8. Ibid. lxxvi.5,8,10.
9. Ibid. 4,9.
10. Ibid. lxxvii.5.
11. Ibid. 6.
12. Ibid. 7.
13. Ibid. 7-8.
14. Ibid. 8.
15. Ibid. xvi. 30; xliv.9; li.19; lix.5; lxxvii.8; lxxix.2,12; lxxxvi.11.
16. Ibid. lxxvii.13.
17. Ibid. xvi.30; lxxvii.13; lxix.16; xxvii.9; lxxxvii.11.
18. Ibid. xli.2; lxxvii.16,28.
19. Ibid. lxxvii.9-11.
20. Ibid. xliv.4; liv.106; lvii.3,6; lix.6; lxxvii.11.
21. Ibid. xxx.29; liv.121; lv.7; lxxvii.12.

Food: People in general were not strictly vegetarians in the sixth century A.D. though Fa-Hien makes us believe[1] that they were so at least in the Madhyadesa towards the end of the fourth century A.D. Whether the people changed their food habits in the following centuries or Fa-Hien, being a Buddhist traveller who invariably remained in the company of vegetarian Buddhists overlooked this phenomenon in the society at large, should be dealt more critically. The catagorical statement of Fa-Hien cannot be vouchsafed because Kalidasa[2] on the contrary confirms with equal force that meat-eating was prevalent among the people.

It is difficult to trace the history of vegetarianism in ancient India. At the same time it is hazardous to be adamant on the point. Its origin synchronises invariably with the age of the Buddha and emergence of Buddhism. It progressed with the evolution and spread of Buddhism. It never became the way of life of the people. Despite being a Buddhist himself, Asoka could only minimise the number of slaughtering animals with the hope of total abandonment in course of time. The Buddhists were the great protagonists of vegetarianism. They, as it seems, must have converted the food habits of the people to a great extent. But the inroads of the foreigners and consequently the rise of the Guptas, the revivalists of Vedic culture and its institutions, the most important among them being the Asvamedha Yajna, must have checked this silent movement.

The statement of Fa-Hien hence is not incorrect in

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1. Legge p. 43.
2. Sak act ii. p. 19. cf Raghu ix.53; iv.46-47.

as much as the people of Madhyadesa must have resisted the influence of the neo-Vedic culture of the Guptas for sometime in the beginning but in course of time they were fully absorbed in the new set-up and we find that during the times of Varahamihira there are no inhibitions against meat-eating or even wine-drinking, which can again be corroborated by Hiuan Tsang,[1] Bana[2] and Dandin.[3]

The Puranas viz., Kurma, Varaha and Yama, do not find anything wrong with the eating of meat offered to gods or served in a sraddha.[4] Medhatithi distinguishes between an act of animal slaughter for ordinary purposes and for a religious purpose.[5] On the latter occasion he permits meat. Giving up meat diet, however, was not unoften commended by the Hindus on the religious and other considerations.[6]

Among the Buddhists we find two different practices. The Hinayana Buddhists of A-Ki-Ni (Yenki, in Chinese), who in matters of Vinaya followed India and strictly observed the rules of their order, are said by Hiuan Tsang to have adopted the "three pure " kinds of flesh as permitted by the Nirvana Sutra.[7] But the Mahayanists were opposed to meat eating.[8]

Ordinarily all Jainas, whether monks or laity, totally abstained from meat diet. But if Jaina monks had to

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1. Watters 1.178, 344.
2. HC p. 208.
3. DKC pp. 216-17.
4. Kurma xvii. 35-36; Varaha 12-13, p. 93. Yama, quoted in Kr Krtya Kalpa Taru of Bhatta Lakshmidhava.
5. On Manu II.30.
6. Uttara Rama Carita iv. pp 203-4.
7. Watters I, p. 53. cf Takakusu pp. 46,58.
8. Siksasamuccaya p. 317 (Tr. M. Dutt); See also Watters I.344; Takakusu p. 44.

pass through countries where it was not possible to get vegetarian diet, they could, according to some authorities, accept meat as alms. But this was only an Apadadharma, to be followed in case of emergency.[1]

MEALS: There were three major[2] meals served in the forenoon, in the afternoon and again at night. The term 'Bhaksya'[3] and 'anna'[4] denoted solid edibles and food in general respectively. It was generally held that the food should be well-cooked, clean, attractive, agreeable to one's mind and tasteful. If it does not fulfil above mentioned qualities and is tasteless, defiled by hair and flies, emits bad smell, is burnt, insufficient or apt to weaken,[5] it should be avoided. All these tend to prove that every effort was made to prepare the various dishes with care and hygienically.

VEGETARIAN FOOD: The majority of the people appears to have been in favour of vegetarian diet, as has been noticed for example by Fa-Hien. Rice with its numerous varieties like Sastika, Kalamasali, Sali, Yavaka, Sukaraka, Pandaka, Raktasali, Gauraasali and Nispava, barley and wheat formed the staple food of the people. According to I-tsing wheat flour was in abundance in the North; in the western districts baked flour)rice or barley) was mostly used; in Magadha wheat flour

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1. Jain, J.P., Life in Ancient India, pp. 127-28.
2. Kama pt. 1 ch. iv. p. 118.
3. BS xlvi.28.
4. cf Panini p..101.
5. XX vii. 22; XXX iv.20.

was scarce but rice was plentiful and the southern frontier and eastern border lands had products similar to those of Magadha.[1] Pulses, it seems, were consumed as freely as now and formed one of the principal ingredients of the menu. The different varieties were horse-gram, Ervum Hersutum, Dolichos uniflorus, beans, kidney beans, and peas. Harsa's army is said to have included plenty of gram within its supplies during the course of its Digvijaya.[2] Mustard, Sesamum, linseed and coconut yielded various kinds of oil for seasoning and frying.[3]

The green vegetables were among the other delicacies served on the table though Varahamihira is not very much in favour of consuming leafy vegetables or saline pot-herbs in excess which, according to him,[4] cause loss of eye-sight and manhood.

Fruits were also taken in plenty either separately or alongwith the meals. Mention may be made of mangoes, plantains, plums, pomegranates, jujubes, grapes, jambu, coconut, date-palms, Pilu, Tamarind, Lodhra, wood-apple, myrobalan, diospyros, jack-fruit etc. to which Hiuan Tsang[5] adds quite a few more in the list but corroborates at the same time that fruit consuming habits were prevalent in India during his times which may be pushed back to the earliest records written in India wherein we find the great sages living solely on fruits and roots.

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1. Takakusu p. 43.
2. HC vii. p. 210.
3. BS xv.9; xvi.19; xli.8; xlii.5.
4. Ibid. lxxvi.12. of Utpala.
5. Watters i. pp. 177-78; See also Takakusu p. 44; Kavya Mimamsa pp. 111-12.

Milk and milk-products like curd, Ghrta, Ajya,
Havis or Sarpis, clarified butter, used as frying material
and for seasoning rice and other items of food and Payahsarpis;
butter derived from fresh milk, also employed for frying and
seasoning, being the same as Panini's Phanta and Ksirottha
Navanita of Susruta; Takra, butter milk mixed with one-fourth
or half water; Mathita, butter milk without water; and
Navanita, fresh butter extracted from curds after churning,
were highly valued for their invigorating properties. Goat's
milk as well as cow's milk were freely used. Sugar was
added to enhance its flavour.

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1. BS xiv.7; xvii.23; xxxv.4; li.31; cv.8 etc.
2. Ibid. ix.45; xxxi.18; xliii.60; xlv.6; xlvii.25; lix.8; lxxxi.5; xcv.22; lxxxvii.14; xciii.8; lxxxvi.45; lxxix.7; cf YY vii.16.
3. Ibid. v.60; xvi.19; xlii.5; l.21; liv.108; xlv.7; lxxv.9; xcvii.10 etc.
4. Ibid. L.37; lix.12; lxxvi.6; xlvii.32 etc.
5. Ibid. 23.
6. Ibid. xlviii.50; lxxvi.8.
7. Ibid. lxxvi.9.
8. Ibid. 4.
9. Ibid. xcv.24; cv.8.
10. Ibid. lxxvi.4.
11. cf Utpala lxxv.4.
12. Panini p. 109.
13. Sutrasthana xlv. 93.
14. BS liv.114; lxxvi.11.
15. Amara ii.9.53; Caraka vol vi p. 337.
16. Susruta, Sutrasthana xlv.85. cf Caraka vol vi.p.345.
17. BS L.26.
18. Susruta, Sutrasthana, xlv.86. cf Amara ii.9.53.
19. BS lxxxi.4. cf Mal act iii.p.87.
20. Amara ii.9.52.
21. BS lxxvi.4,6,7-8.
22. Ibid. xix.5; xlv.7; xlvi.6; xxxii.29.
23. BS lxxvi.9.
24. Ibid. lxxvi.5.

Mention may be made of sweets like Modaka,[1] popularly known as Laddu in northern India; Palala,[2] prepared from pounded sesamum and Gur or Sugar; Pupa,[3] a sweet cake made of wheat-flour, sugar and fried in clarified butter; Payasa,[4] or Paramanna[5] same as modern Khira which seems to have been derived from Ksirini of Utpala;[6] honey,[7] molasses, Sarkara,[8] granulated sugar; and Phanita,[9] inspissated juice of sugar cane boiled down to thick consistency, which was regarded as an inferior variety of molasses.[10]

RICE DISHES: The most favourite dish prepared out of rice was that of Odana,[11] boiled rice invariably prepared from Sali[12] and Sastika[13] varieties. Meat-pulao (mamsaudana) was another delicacy prepared in combination with milk and sometimes it was done with milk and sesamum, commonly known as Tilaudana.[14] Other varieties were prepared with fish, curds, molasses and milk.[15] Ordinary Odana dish was generally taken with[16]

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1. BS IIx.8; lxxxix.1. cf Dalahana on Susruta Sutrasthana xliv.12,13; Vik Act iii p. 78.
2. Ibid. 8; xcv.22; YY vi.19. Utpala takes it to be semi-pounded sesamum, on lviii.8.
3. Ibid. xliii.38. It was also prepared from green gram or rice; Utpala on xlii.38.
4. Ibid. xliii.38; xliv.11; xlvi.32; xlviii.36; YY vi.19.
5. Ibid. xii.16; xlv.64; lviii.8; xciv.23.
6. Utpala on xlv.32.
7. BS v.60; xlii.5; xliv.11; xlv.27; L.37; lix.12; lxxvi.3; lxxvi.11,27,32. Ksandra (BS xliii.60; liv.108; lv.7; lxxvi.6) and Maksika (BS xv.9) are two of the eight varieties of honey mentioned by susruta (Sutrasthana xlv.133)
8. Ibid. x.8; xvi.13; xli.4; xliv.38; lxxxix.1.
9. Ibid. lxxvi.5,6; lxxvii.11.
10. Ibid. xlii.5.
11. Utpala on xli.5.
12. BS xlviii.30; lix.8; YY vi.12,18.
13. Ibid. li.30. cf Takakusu p. 43.
14. Ibid. 30; lxxvi.8; xcv.20; YY vii.17; BYY xviii.9-10.
15. Ibid. xliii.30; BYY xviii.23-24.
16. YY v.14; vi.8; vii.17,21. cf Williams, M., Dictionary, p.375.
17. Ibid. v.14.
18. BS xcv.51; Pat 13.
19. BYY xviii.9-10.
20. YY vi.5.

pulses.[1] Ghee was[2] invariably used in preparation of the rice dishes. Saskulika[3] was another dish prepared with rice. The method of cooking rice is described[4] in the Dasakumara-Carita Uttararamacarita[5] and Manasollasa.[6]

Barley was another foodgrain which provided staple food[7] to the people. Saktu or modern Sattu was prepared by grinding fried barley grains which was taken either doughed with water or beans,[8] adding sugar, mollasses or salt.[9] Yavaka and Yavagu[10] are other dishes prepared out of barley.[11] Ullopika appears to be another vegetarian dish.[12]

Soup of various pulses was commonly prepared.[13]

NON VEGETARIAN DIET : Meat, as already mentioned, had[14] come to stay as one of the most important articles of food despite the statement of Fa-Hien to the contrary. The reference to slaughterers, fishermen, fowlers and hunters confirm this[15] view. That the meat eating habits were wide-spread in the next century, is borne out by[16] Hiuan Tsang, Bana[17] and Dandin.[18]

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1. BS lxxvi.8.
2. Ibid. 8.
3. Ibid. lxxv.9. Saskulis were made of the flour of Sali mixed with sesamum seeds and fried in oil. Caraka vol.vi. p. 342.
4. DKC pp. 161-62.
5. iv. 11.
6. verse 1352, p. 116.
7. BS xlvi. 63.
8. BPP iv. 24-27; PP vii.18.
9. PP vii.19; BPP iv. 24-27. cf. Caraka (Sutrasthana xxvii.264) refers to Saktu made of Sali.
10. BS xlivv.11; PP vi.19; BPP iv.23-27. cf Panini p. 106. Utpala identifies Yavaka and Yavagu (BS L.31) of Caraka Sutrasthana xxvii. 261.
11. Ibid. Li.31. cf. Caraka op.cit. xxxvi. 155.
12. Ibid. lix.8. cf Kern JRAS 1893 p. 328. Utpala xlviii.28.
13. Ibid. lxxvi. 3.
14. Ibid. xv.2; lxxxvii.10; xcv.22.
15. cf Mal. Act ii p. 54; Raghu ix.53; iv.46-47.
16. Watters i. pp. 178, 344.
17. HC p. 208.
18. DKC pp. 216-17.

Numerous dishes were prepared from the meat of various animals viz., elephants, buffaloes,[1] sheep, boars, cows or bulls, hares, deer, lizards and fish. Varahamihira especially recommends the ceremonial eating by the monarch of the fish, the flesh of buffalo, bull, he-cat, goat, deer, five animals beginning with Asvin and of birds like Samkara[2] and others.[3] Meat of the acquatic animals was also relished.[4] Meat pulao was one of the occasional dainties. However, persons initiated into a sacrifice were to refrain from taking meat.[5]

Spices were used in the preparation of the various dishes both vegetarian and non-vegetarian. We have reference to salt,[6] rock-salt,[7] long pepper,[8] black pepper,[9] small cardamoms,[10] ginger,[11] nutmig,[12] cumin seed,[13] averrhoas,[14] and cloves.[15] All these spices must have made the dishes more palatable and rich. Excessive use of spices,[16] however, was considered to be harmful to eye-sight; sperm and manhood.

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1. BS Li. 34-35. cf xxvi.34. YY. vii.17.
2. YY v.14; vii.16-18; 19,21.
3. BYY viii.1.
4. BS xliii.30; BYY xviii.23-24.
5. YY ix. 15-16.
6. BS x.8; xv.9,25; xvi.7; xxvii.4; xli.6; liv.122; lxxvi.11 etc.
7. Ibid. xvi.24; Li.32. cf Watters II.p. 252.
8. Ibid. Li. 15; lxxvii.32-33.
9. Ibid.
10. Ibid. xxvii.4; lxxvii.37.
11. Ibid. Li. 15; lxxvii.32-33.
12. Ibid.
13. Ibid. cf HC III, p. 94.
14. Ibid. xxviii. 4-5.
15. Ibid.
16. Ibid. lxxvi.12.

ALCOHOLIC DRINKS: The drinking of liquor was not prohibited. It was recognised as a friendly social custom. Wine was quite popular in the Pre-Gupta period.[1] The Arthasastra of Kautilya gives a graphic description of alcoholic drinks and practices. The different types of liquors mentioned are Rasa,[2] Madhya,[3] Madhu,[4] Madhvika,[5] Asava[6] and Madira.[7] According to Kautilya Asava was extracted from Kapittha (Feronia Elephantum), Phanita[8] (sugar) and honey. Madhu was the fermented juice of grapes.[9]

There were no inhibitions for the women against drinking of liquor. We have a reference to men taking wine in company of their lady-loves in the spring season.[10] Vatsyayana goes to the extent that men should drink wine only after women have been served.[11] According to Kumarila Bhatta, even the Brahmana ladies of Ahichatra and Mathura were addicted to it during his time.[12] Medhatithi allows non-Brahmana ladies to take wine on festive occasions.[13] Inebriety was considered to impart an unusual charm to ladies and Varahamihira speaks of a man playing a bee on the lotus- like countenance of his

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1. Artha bk ii ch. xxv.
2. BS x. 8.
3. Ibid. xvi. 13; xlviii.30; liv.8; lxxvi.11, YY ii.4. cf Ritu v.10, p. 62.
4. Ibid. xix.19; lxxvi.2. cf Kama pt. 1 ch.iv. p. 115.
5. Ibid. Li. 5.
6. Ibid. xlviii.28; xcv.22; BYY xv.2; VPat 13. cf Ritu iv.11, p.52; Kama pt. 1 ch. iv p. 115.
7. YY v.12. cf Ritu vi.10 p. 70. cf Watters I p. 178.
8. Artha ii xxv. p. 120.
9. Ibid.
10. BS xix. 18. cf HC III p. 97; iv.p. 130; Kad p. 117.
11. Kama pt. 1 ch. iv p. 115. cf Sisupalavadha ch. x.
12. Tantravarttika (Eng. Trans.) p. 194.
13. On Manu ix. 84.

sweet-heart.[1] Kalidasa refers to women as taking wine which[2] can also be corroborated by contemporary inscriptional evidence.[3] But Varahamihira censures the excessive drinking by women.[4]

The liquor was taken both secretly with guests as well as in open on festive days. It was also prescribed by the physicians for medical purposes.[5] Drinking wine, however, was forbidden for a man performing a sacrifice or other rituals.[6]

Varahamihira spiritedly pleading the cause of prohibition describes the evil effects of drunkenness quite extensively, which are similar to those pointed out by Dandin,[7] who is rather more eloquent in favour of liquor consumption as well.[8] Wine has been called as the cause of the vicious circle by Varahamihira who asserts that it tends to weaken men of scanty means, intelligence, strength and welfare; losing all common sense and depending on the urge of sense organs, a drunkard is unable to discriminate between what should be eaten and what not and the like; he takes mother for wife and vice versa; a house for a clod of clay, and well for a house; he regards a little of water as an ocean and the latter as flat earth, and poses as befriending a king; what else there

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1. BS civ.22.
2. Raghu vi. 75; vii.11.
3. The Mandasor stone inscription of Kumara Gupta I and Bandhuvarman, dated A.D. 475-76 records "Cheeks of intoxicated women". CII iii p. 81.
4. YY v. 12.
5. Ibid. ii. 7.
6. Ibid. ix.15-16.
7. DKC p. 97.
8. Ibid. p. 210.

is that a drunkard would not contemplate to do.[1]

Despite such warnings, the habit of drinking wine was more aggressive than the propaganda in favour of prohibition. In Varahamihira's society, wine was very popular and consumed by both the sexes, poor as well as rich. Varahamihira feeling helpless at the failure of the cause of prohibition, however, comes out with a compromise and urges that should you take liquor, take in limits and never in excess to the extent that you may lose your senses.[2] The popularity of liquor is also borne out by Hiuan Tsang[3] who points out that the Ksatriyas, Vaisyas, Buddhist monks, Brahmanas and the mixed castes drink wine of special brand peculiar to their caste. The evidence of Bana[4] is an additional support to prove the popularity of wine or liquor. With the Tantric teachers Madya (liquor) formed one of the five 'M's (Panca-makaras), i.e. the five compulsory observances.[5]

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1. YY 11. 4,5.
2. Ibid. 7.
3. Watters 1 p. 178.
4. HC pp. 66,82,104,171,214; Kad pp. 16,179.
5. cf. Matrkabhedha Tantra III.50. See also HD vol.I, pp.7, 8,13,20.

FAMINE: The causes of famine were six-fold, enumerated as : excessive rain, drought[1], rats, grasshoppers, parrots and neighbouring kings.

Rains played hide and seek with the luck of farmers in the agriculture-infested population of India. As many as ten full chapters of the Brhat Samhita[2] are devoted to either rainfall or prognostics about rainfall besides a number of references in other texts[3] of Varahamihira.[4] Hence when there were timely and copious rains there was prosperity all-round, plenty of food and corn, wealth, large herds of cows and abundant of milk-supply etc. On the contrary if the rains are excessive, there are floods creating havoc and misery by destroying crops and everything that come in their way and leaving behind nothing but sorrows, want, and death.

Varahamihira gives an interesting account of predictions pertaining to several cases of excessive rainfall, floods and inundation causing crop failures and famine.[5]

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1. Utpala v.52; BS vii.44.
2. BS chs. xxi to chs. xxix and xxxv.
3. BS ii.12; iii.16,22,24,27; iv.11,16; v.55,70,74,86; vi.10,11; vii.2,14; viii.6-8,14,25,32,36,50; ix.27-32, 35, 37-39, 43-44; x.2; xvii.4,21; xix.2,21; xxi.3-4,22,26, 28,31,33-35,37; xxii.2,4-8; xxiii.1,3-10; xxiv.21-22,26,29.
4. Ibid. iii.5; iv.9,11,16,18-20; v.20-22,30,53,55,57,69-70, 75,78-80,83,85,87,89,96; vi.3,4; vii.4,14; xii.5,6,9,11, 13-15,30,34,36,44,50,52; ix.8,10,12,16,20; xi.8,14,29, 37-38,43-50;xii.20;xviii.2-5; xix.4,14-16; xxiv.20,23-24, 33,36; xxv.2,5; xxvi.1-2,6-7; xxix.1-5,12; xxxiv.4; xxxvii.1; xl.2-7,11,13-14; xlv.4; lxxix.10; xcv.2,4,6.
5. Ibid. iii.37; viii.40,44,48; ix.26,36; xxiv.19,35; xxx.14; xxxi.22; xxxiv.6,12; xlii.1; lxxxvi.36; lxxxix.6.

Junagadh inscriptions of Rudradaman and Skanda Gupta[1] refer to floods by bursting of the dam of Sudarsana lake due to excessive rainfall and consequent famine rendering the people in a state of great distress and havoc.

There are numerous references of famines caused by drought following scanty or no rains[2], giving rise to the same consequences as occasioned by the excessive rainfall. No doubt two rainfalls in a year corresponding to two main crops, with a plenty of rivers and rivulets were a boon to the farmers in India, but this brought about complacency, with the result that the people became lethargic and they overlooked the necessity for developing artificial irrigation. Even the prediction of 12 years' drought[3], no doubt proverbial, did not remedy their deep-rooted habits.

In consequence of drought there were mass migrations[4] from one part of the country to another part which had big towns, mountains and rivers, in search of food, shelter and water, which they had never visited before. Even in modern times in India, it happens the same way under similar conditions, to avoid dearth of food, famine and diseases.

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1. CII iii. p. 56. In the RT references to famine due to the floods of Vitasta and the Mahapadma lake in Kashmir are mentioned. (v.68-71; 80; etc.).
2. BS v.20,23; vi.2,5,8; vii.3; viii.4,18,28; ix.30,41; x.2; xi.31; xii.20; xvi.42; xx.2; xxix.12; xxx.9,12,14,21; xxxii.28; xxxii.12; xxxv.5; xliii.64; xlvi.38; xlvii.12,13; liv.111; lxxxix.7; xcv.5,59.
3. BS iii.28. The Jain literature mentions 12 years' famine during the reign of Candra Gupta Maurya. CHI vol i p. 147. Yaska speaks of 12 years' drought that occured in the reign of Santanu (Yaska Niruka 1.2,3,10; Rgveda viii.5,12).
4. Ibid. xvi.42. For description of famine conditions see Ibid. xix.1-3.

Plundering of crops by robbers[1], may be mentioned as another cause of crop destruction. It affected only a small tract and consequently fewer people were disengaged. But wars[2] heavily burdened the people by their wholesale destruction of the country which eventually brought about the famine conditions. The foreign invasions were a major cause of famine in the fluid conditions especially at the time of the fall of a big empire like that of the Guptas towards the beginning of the sixth century A.D. which became more oppressive and turbulent with the lapse of time with the inroads of the Epthalites into India. The border states face this calamity inherently.

The next danger to the farmers was from rats, grasshoppers, parrots, locusts, and wild-animals[3], which might have been avoided to a great extent by the employment of field-watchers, hunters and fowlers - the references[4] to which are numerous[5]. The pestilences[6], epidemics[7] and diseases destroying men[8] and the animals[9] created yet another grave

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1. BS xix.8.
2. Ibid. iii.20,22; iv.10; v.24,57,59-60; vi.8; vii.16; viii.22,34,46; ix.38,44; x.2, 20; xi.20,38,52; xvii.5; xix.3; xx.1,2; xxvii.4; xxx.4,9,27; xxxi.2; xxxiv.6,11, 16; xxxv.4; xlii.2; xliii.28; xlvi.19,23,25,27,40,43,75; xlvii.7-8,11,26; l.5; xcv.46.
3. Ibid. viii.4.
4. In the Raghu the wives of the cultivators are mentioned as guarding the Sali-paddy (iv.20). The hunters and fowlers were given a subsidy of grains from the king for rendering service to agriculture by the destruction of these pests as pointed out by Megasthenese. (McC Meg. p.84).
5. BS v.27; xi.12,30; xii.22; xxxi.25; xxxv.4; xlvi.80; lxxix.24; lxxx vii.33.
6. Ibid. v.58; viii.47; xlvi.40,71.
7. Ibid. v.56, 82,92; vi.2; vii.2,5,7,16; viii.4,17,32,34,42, 61; ix.23,33,42-44; xi.29,31,37,43; xii.20; xvii.5; xix.9; xxx.13,17; xxxi.18; xxxiv.15; xxxv.5; xxxvii.2; xl.7; xliii.27; xlv.8; xlvi.25,27,38-39,61; li.14; liii.60; lvii.50; lx.6; lxxi.5; lxxix.5.
8. Ibid. iv.29; ix.13,40; xvi.41.
9. BS iv.11.

problem of labour shortage and annihilation of the cattle affected adversely the progress of agriculture. Destruction of the two-thirds of population[1] referred to is a terrible mortality in a land.

Lastly the natural calamities viz., earthqua-kes,[2] fall of meteors,[3] dust-storms,[4] hurricanes,[5] hailstorms,[7] thunder-bolts,[7] and fire[8] played havoc with the crops and forests. A single tremor of earthquake can destroy everything. The eastern wing of the Himalayas comes under the earthquake belt. Mild shocks are felt in every part of India at times.

The chapter Bhukampa-Lakxana in the Brhat Samhita is a very interesting study about the causes, occurrence and predictions of earthquakes. The biggest earthquake recorded by Varahamihira[9] affected to the extent of 200 yojanas. The necessity of including such a topic suggests that the earth-quakes were frequent during his or prior to his times. But we have no definite evidence of earthquakes in ancient India.

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1. BS ix.39.
2. Ibid. ii.18; iv.12; v.63,92; xvii.16; xxi.25; xxii.25; xxiii.1,10,14,18,22-24,28-29; xxxii.12; xxvii.5.
3. Ibid. ii.18; iii.33; v.16,63,93; xii.22; xxxi.13; xxxii.8,14-15,18-23,29-30; xxxiv.8; xlii.1; xlvi.4,86, 94.
4. Ibid. ii.18; v.63; xxi.25; xxii.4.
5. BS v.23; xxi.16,22,25,31-32,37; xxii.19; xxvii.12; xxx.32; xxxi.17,23; xxxix.1-2; xl vi. 4,84; lxxxvi.59; xcvii.6.
6. Ibid. ix.42; xxi.33,35; lxxxi.24.
7. Ibid. iii.10; v.58,63; ix.20; xii.7; xxi.33; xxiv.25; xxxii.6; xxxiii.1,4; xxxvi.4; xlvi.84.
8. Ibid. v.60; vii.1; viii.17,28,42,47; ix.41,44; xix.7; xxiv.15,23; xxvi.12; xxvii.2; xxviii.21; xxx.14; xxxiv.15; xxxv.4; xxxvi.3; xliii.65; xlvi.19; liv.97; lix.3; lxix.30; lxxx.43; lxxxvi.31,40; lxxxix.3,5-6,13; xc.6; xcv.7,13, 40,56.
9. Ibid. xxxii.31.

IRRIGATION: The question of irrigation is very vital for a high crop yield. Rains,[1] rivers, lakes and springs are the natural means of irrigation[2] which are so scarce in the various parts of India. Hence the artificial irrigation relating to the excavation of tanks, pools, canals and wells was undertaken individually or collectively to safeguard against famine and untimely droughts. Consequently, the exploration of new sources of water-supply was a subject for a special course of instruction, the necessity for which has rightly been advocated by Varahamihira[3] under the title Dakargalam, i.e.,'the Exploration of Water-Springs'. The importance of irrigation is also recommended by the contemporary and other Smrti writers[4] and confirmed by the Gupta epigraphs.[5]

TANKS: A tank was designed to extend from east to west which was preferred to the one built from north to south for the former retains water for a long time while the latter is spoilt invariably by the waves raised by the wind. The material used for its embankments was construction of either strong timber or stones,[6] to which Utpala adds burnt bricks and long pebbles. The soil was hardened by the

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1. R.S. xxi.1.
2. Maity p. 86.
3. BS liv. (full).
4. Narada xi.18,20-21; BK iv.191; v.68-72; 80-121; Amara ix.7 p. 62; ix.36 p.67.
5. CII iii p. 56.
6. BS liv. 118-119.

trampling of elephants, horses etc. The banks of the tanks were shaded by various kinds of trees evidently to keep the place cool and shady thereby warding off the rays of the sun to the maximum. Out of the well-laid tanks, small outlets were made. The epigraphs of the contemporary age refer to the tanks by several terms, Vapi generally denoting a tank of smallest size.[1][2] Thus water was stored for lean days.

Kūpa: Well. The place where a well is to be sunk, was first honoured with flowers, perfumed and incenses, then were offered oblations to Varuna. After this a wedge of banyan or Vetasa tree was sunk at the sacred spot of the earth.[3] The sinking was to be performed under the propitious asterisms.[4] If the water of the well is muddy, pungent, saltish, of bad taste and not of good odour and to make it clean, tasteful, good-smelling, and endowed with other good qualities was done by pouring into it a mixture consisting of antimony, musta bulbs, andropogon, powder of Rajakosataka and myrobalan combined with Kataka-nuts.[5] It seems that they were used both for irrigation of land as well as for drinking water. It was considered inauspicious to sink wells on the south east or south west or north west of the village or town for such omission on the part of the builder might cost him grave consequences.[6] Well in directions other than these are recommended.

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1. CII pp. 75,166. cf EI xi. pl.1 p. 107; pl.11 p. 111; pl 111, p. 113.
2. Maity pp. 87-88.
3. BS liv.124.
4. Ibid. 123.
5. Ibid. 121-22. cf Susruta 1.45.17; Amara 1x.10 p.62; CII iii. 76.
6. Ibid. 97-98.

Dykes[1] The dykes were taken out of such tanks which were made of stones. A panel without apertures fixed in a frame was fastened to the earth with dust and mud.

DAKARGALA[2] It is a very interesting subject on the exploration of water-springs which made a special course of instruction. The beginning of which can easily be traced upto the times of Sarasvata and Manu, both of whom having been given as authorities by Varahamihira if not to Vedic times and perhaps earlier.

Sub-soil of the earth is the store-house of water, a legacy of the rains. In order to ascertain the existence of water, certain methods, purely non-mechanical were undertaken for its exploration. It was held that just as there are veins in the human body, so do they exist, some higher up, others lower down, in the earth. The water that falls from the sky with the same colour and taste, assumes various colours and tastes[3] owing to the difference in the nature of the sub-soil of the earth.

There are hundreds of veins bearing distinct appellations issuing from nine principal veins known after their respective lords of the quarter, the ninth being Mahasira (great vein)[4] in the centre. The veins issuing from the nether world and the four directions were considered auspicious and those running from intermediate zones inauspicious[5]. The qualities of the various soils of the earth

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1. BS liv.120.
2. For details, see Louis Renou, La Civilisation de L'Inde ancient, p. 197. cf Visampatha Jataka (Fausboll, i.no.2).
3. BS liv.1-2. cf Susruta 1.45.3-4.
4. Ibid. 3-4.
5. Ibid. 5.

are different - a copper coloured soil mixed with gravel yields astringent water; red-brown, brackish, pale-white, salt; and blue, sweet water.[1]

The water springs can generally be located in the vicinity of the jungles where glossy trees that have long drooping branches are found.[2] Also where trees, shrubs, and creepers are smooth and densely covered with leaves.[3] The grass-lands have plenty of water underneath.[4] On the contrary the hollow and rough trees with shattered leaves or the rocky region that is pale-white or is filled with red or variegated spots, is waterless in the neighbour-hood.[5] The water-belt was hit deeper in the desert region than that of the forest region or the semi-forest region. The soils pertaining to the quantity of water can be divided into five regions: swampy, forest, semi-forest or waterless tract, desert and rocky. The general rule for ascertaining the presence and quantity of water in a certain region depended on the nature of the soil and the vegetation grown over it, for instance, if there is an Indian fig-tree grown on a semi-forest soil, there will be a vein of good water at a distance of only three cubits to its west and at a depth of 12½ cubits. While digging at the particular spot, the signs coming across at a depth of five cubits will be a white snake and further below a stone as dark as collyrium, under which the water vein running is located.[6]

1. BS IIv. 104.
2. Ibid. 49.
3. Ibid. 100.
4. Ibid. 52,77,103.
5. Ibid. 49.
6. Ibid. 11.

A number of other tests in the self-same direction are cited by Varahamihira giving details about the nature of the soil, the object found over it and distance and depth of the water-belt with some finds available at certain levels of the digging.[1] It marks a unique feature in the system of irrigation in ancient India. It was as a result of this study that the farmers in ancient India were able to harness stored water for the benefit of their crops in the riverless steppe lands by sinking wells. The sweet and cold water full of minerals was also utilised for the domestic use.

GARDENS AND LAKES : The age of Varahamihira witnesses yet another significant change in the outlook of the people in regard to their interest in gardens and parks which abounded the cities and the towns.[2] It was a period of heyday for arbori-culture which had come to stay as a science by this time[3] and was regarded as one of the sixty-four subsidiary arts, the importance of which had already been felt earlier during the period of the author of Arthasastra.[4] We see that small gardens were generally attached to the houses.[5] These were considered to be the ornaments of every household during the[6] age.

The orchards were laid out on the banks of water tanks to lend them scenic beauty, as according to Varahamihira[7] they do not look lovely without shade on their margins. Both

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1. BS liv. 102.
2. Ibid. lvi.8; YY xvii.14.
3. Kama 1. 3.16.
4. ii.24 p. 115.
5. BS lv 3 of Kama 1.4.4.
6. Mal act iii p. 56; Raghu viii.32.
7. BS lv.1.

flowers plants and fruit trees graced the luxurious gardens. We have references to artificial (Krta) as well as natural (Akrta) gardens.[1] References to palace gardens and town parks filled with fruit trees and flower plants are also available from the other works and the parks or flowers' gardens are very elaborately described in them.[2]

The maintenance of public parks constituted one of the charitable acts called Purta[4] and was considered to be the duty of the state as furnished by the epigraphic records.[5] It may be noted here with interest that the influence of state control over parks can be attributed to urbanisation and industrialisation witnessed during the period.

Love for nature and its beauty which urged the people to have gardens and public parks around them further manifests itself in their selection of surroundings for religious places. We have thus temples in the vicinity of lovely gardens with plenty of water and scenic beauty,[6] and the parks serving as venues of religious sacrifices.[7] It can be suggested that the horticulture has had the pride of place in the religious life of the people as well during the age.

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1. BS lvi.3.
2. Vik act ii. p. 23; Sak act 1.10. p.6; Raghu xii.3.
3. Udyana BS xvi.38; xlv.4; xlvii.15; lvi.3; lix.2; Arama, Ibid. lv.1,2; lvi.2; BJ xvii.4(Udyana-Sakta).
4. HD 11 pp. 157 fn.370.; 844 fn.1992.
5. ASWI iv. p. 99; CII iii. p.156.
6. BS lvi.3.
7. Ibid. xlviii.15. cf CII vol.iii p. 156.

PLANTATIONS: A soft soil is said to be generally favourable to all sorts of trees[1] excepting the 16 trees specially recommended[2] to require moist soil for their proper growth. The soil should be enriched with manure to ensure increased yield of flowers and fruits of trees, creepers and shrubs. A number of different varieties of manuring[3] like the green manuring and substances and preparations possessing manuring properties[4] were known and applied to the land to make it more fruitful. Trees could be planted by the methods of grafting, cuttings, transplantation and from seeds. The process of grafting outlined by Varahamihira and commented upon by Utpala is of unique importance in-so-far as it nullifies the theory that grafting was unknown in India upto the middle of the sixteenth century.[5]

Varahamihira mentions very clearly two methods of grafting, one by inserting the cutting of a plant into the root of another cut off from its trunk and the other by inserting the cutting of a tree into the stem of another, the junction of the two in both the cases being covered with a coating of mud.[6] The grafting was possible in three seasons viz., Sisira, for those that have not yet got branches; Hemanta, that have branches; and beginning of monsoon, that have large branches.[7]

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1. BS lv.2.
2. Ibid. 10-11.
3. Ibid. 2.
4. Ibid. 2,5,7,15-18. cf Agni ch. 194.
5. cf Gode, P.K., History of the Art of Grafting Plants, IC xiii. pp.28-34; Gangopadhyaya, R., Agriculture and Agriculturist in Ancient India p. 69; Majumdar, G.P., Vanaspati pp. 38-40, 63; Upavana-Vinoda pp. 13 ff.
6. BS lv.4-5. cf. Utpala.
7. Ibid. 6.

Trees for plantation were smeared from root to the stem with[1] cow-dung. Ghee, andropogon, sesamum, honey, Vidanga, milk and

The transplanted trees should be watered morning and evening in summer; on alternate days in winter; and whenever the soil is dry during the rains.[2]

Different seeds were soaked in different compounds and kept for some days before planting evidently to quicken the sprouting.[3]

Trees are recommended to be properly spaced out at the time of planting for the trees growing contiguously with their roots interlocked, do not yield fruits in good quantity.[4] A distance of 20 cubits apart was held to be an ideal one, moderate if 16 cubits apart; and inferior, if 12 cubits apart.[5]

Varahamihira also does not miss the opportunity to recommend proper care of trees. He points out that trees, if not properly cared, become diseased due to the agency of cold blasts and heat. He suggests that the ulcers should be removed with a knife and applied a paste of Vidanga, Ghee and silt, followed by a sprinkle of water and milk.[6]

The barrenness of the trees, according to him, can be revitalised if watered with the compound of horse-gram, black-gram, green-gram, sesamum and barley boiled in milk and applied when cooled down.[7]

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1. BS lv.7.
2. Ibid. 9. cf Suk sct i. p. 25.
3. Ibid. 21-30.
4. Ibid. 13.
5. Ibid. 12.
6. Ibid. 14-15.
7. Ibid. 16.

SECTION VI

MINERS AND INDUSTRIAL WORKERS

RESOURCES: The combined sources of both literary and archaeological supplemented by the works of Varahamihira testify that the natural resources available from the mines and forests were properly exploited and various industries were highly developed during the period of our study. The Poona and the Riddhapur plates of Prabhavatigupta[1] clearly point out that the absolute monopoly of the state existed over the mineral wealth.

We have numerous references to mines[2] in the works of Varahamihira.[3] The term Akarika is used for a miner. The minerals[4] in general are also mentioned. The mining industry was well established during our period and the mines were exhaustively worked.[5] This is further confirmed by the Amarakosa which refers to wrought and unwrought gold and iron, iron bars and mines.[6] We have, however, comprehensive list of metals,[7] including gold,[8] silver, iron and bell-metal

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1. EI xv.p.42; JASB (NS) xx.1924 p.59; CII iii pp.238-46.
2. BS xvi.15; xix.10; lxxx.10.
3. Ibid. xv.1.
4. Ibid. v.68; lxix.20; xcv.21.
5. Amara ix.91,99 pp. 220,222; iii.7. p. 79.
6. BS x.17; xvi.4; xxvi.7; xxviii.3; xxix.8,10; xli.2,7; xlii.6; xliii.32; xlv.6; xlix.4,7; liv.110; lx.4; lxxiv.7; lxxix.14; lxxxvi.20; lxxxvii.2,3,30,32; xciii.8; xcv.20; xcvi.13; cv.7,8.
7. Ibid. xi.14; xxi.23; xxvi.9; lxiv.1; lxxxvi.20; xcv.15 xcix.6; xxxiii.10; xxxiv.4; xlii.6; xlviii.46; li.17,19.
8. Ibid. xxviii.8; xli.6; li.17; liv.8,30; lvii.8; lxxxvi.3.

i.e., brass[1], copper[2], lead[3]. The Amarakosa[4] also refers to these metals and tin. The metal making industry was fully developed during that time. The Kamasutra[5] includes the art of metal working (Dhatuvada)[6] in the 64 arts (Kalas).

The iron industry was no less important. The advent of iron is generally associated with the Aryan speaking people and hence for the first time in the Rgveda we find the word 'ayas' mentioned, the meaning of which still remains a mystery. The use of iron was still very limited. It might have been harnessed to manufacture useful implements such as swords, armours, other weapons of warfare, spades, sickles, ploughshares, chains, iron plates and pans and instruments for cutting and working on wood, bamboo and leather and hammers for breaking of stones[7] etc.

The most important function[8] of iron was in warfare.[9] We have references to iron weapons. Swords of the best type manufactured during the time of Varahamihira measured fifty inches[10]. The smallest sword recorded by the author had a length of twenty-five inches. The swords were also used for breaking stones[11], and other iron implements and for rocks,[12] [13]

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1. RV viii.15; BS xl.6; lvii.8.
2. BS xlviii.46; li.17; lx.5.
3. Ibid. lvii.8.
4. Amara ix.88,91,93,94,97,98,103,105 pp. 220-23.
5. Bk 1. ch. iii p. 23.
6. The terms Loha and Ayas are used as generic names for base metals as is evident from BS xxviii.5, xli.6. Commenting on xl.6 Utpala explains that 'Loha' may denote iron (Ayas) or bell-metal (Kamsya). The word Krsna is sometimes prefixed to 'Loha' (BS xli.7; civ.63) and 'Ayas' (BS lxxxvii.26) in order to distinguish iron from copper or bell-metal.
7. BS L.1 ff. liv.112. Cf Amara i.p.10; viii.p. 184.
8. Ibid. L.26.
9. Ibid. ch. L(full).
10. Ibid. L.1.
11. Ibid. 25-26.
12. Ibid. 26.
13. Ibid. liv. 112.

hammers were used. Iron was neither used in the building of houses nor palaces. Varahamihira does not refer to iron in connection with house-building.

Technically iron was fully harnessed.[1] In the Raghuvamsa there are references to the working in iron by heating and beating a piece of iron with the help of a steel hammer. Technicians' high skill in the handling/iron can be/ of easily testified by the Meharauli iron pillar of Candra.[2] It is a miracle of iron industry of Gupta age. The archaeologists have further confirmed it by the discovery of hammers, various kinds of chisel, axe, a padlock, a plate of iron with holes, a door ring, a spoon, a dagger, hatchet and a small iron pot.[3] The discovery of scanty materials as compared with numerous references in literature is probably because they corrode very quickly in the tropical climate of India. Such a decay has been noticed by the accumulation of rust and its musty smell in the rainy seasons by the astronomer himself.[4]

Bronze was equally popular for making vessels[5] and other household utensils. One such utensil has been discovered from Kalighat Hoard.[6] Hiuan Tsang's[7] reference to King Purnavarman's copper image of the Buddha more than 60 feet high at Nalanda may be an exaggeration but it supplements that copper was being widely used for fashioning images. But the

1. Raghu xv.39.
2. For details see CII iii p. 139.
3. ASIAR 1911-12 p. 92 no. 16.
4. BE xxviii.5.
5. Ibid.
6. Allan, Gupta Coins, c.xxiv.
7. Watters ii. 171. For manufacturing images of such extra-ordinary dimensions, large copper foundaries must have been needed. But no foundary of such an abnormal size has been discovered so far.

most valuable piece of colossal copper statue found so far is that of Buddha of about 7½ feet high from Sultanganj,[1] now in the Birmingham Museum.

Copper according to Hiuan Tsang[2] was obtained from Takka, Kuluta and Nepal.[3] Copper images and thrones have[4] been referred by Varahamihira. A copper sculpture of a standing female figure has been found from Bhita near Allahabad,[5] and also are found a number of household articles. Heating of copper referred to by Varahamihira[6] suggests that the process of manufacturing such articles was in most cases casting. Hammering after heating was also followed in a few objects.[7] Copper coins have not been mentioned by Varahamihira. Candragupta II was the first monarch of the Gupta dynasty to have initiated the copper coins.[8] A couple of copper seals have also been unearthed. The progress in the working of other metals such as silver, copper, bronze or bell-metal was well developed in our period.

Varahamihira throws a flood of light on the mining of silver. It was generally believed that silver was not mined in India.[9] Varahamihira's reference to silver mining[10] is a sweeping testimony to this regard that silver mines did exist in ancient India which is further supplemented by the

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1. Smith, History of Fine Arts in India and Ceylon p. 82, pl.47b.
2. CA p. 502.
3. BS lx.4.
4. Ibid. xliii.46.
5. ASIAR 1911-12 pp. 89-91.
6. BS vi.13.
7. ASIAR 1911-12 p. 89.
8. CA p. 653.
9. Cunningham, Coins of Ancient India, p.5; Maity pp.180-81.
10. Rajatakara BS xvi.26.

account of Hiuan Tsang[1] who states that "gold, silver, tu-shih (bell-metal), white and crystal lenses are products of the country which are very abundant." We further learn from his subsequent detailed description that gold and silver were obtained from Bolor (little Tibet), Takka, Kuluta, Satadru in the Punjab and Sind.

References[2] to silver images[3], vessels[4], ladles[5], weighing balances[6], and thrones in the works of Varahamihira do not tally with the finds of the archaeologists so far. Silver coins[7], as testified by Hiuan Tsang, were also media of exchange in the commerce of the country. Pre-Gupta, Gupta, Post-Gupta silver coins stand testimony to the fact.

Varahamihira does not omit to mention jewellery. Various gold ornaments[8] adorning the different parts of the body[9] have been alluded to. For instance we have girdle[10], Masuraka[11], Manjistha[12], armlet (Keyuram)[13], necklace[14], Nevasa, etc. The Mandasor inscription of Kumara Gupta and Bandhuvarman[15] refers to women wearing necklace (Hara). The Malia copperplate of Dharasena II mentions[16] the hair ornaments of the subordinate kings.[17] From the Bhita excavations are discovered

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1. Watters i, p. 178.
2. BS lx.4.
3. Ibid. lxxxi.26.
4. Ibid. xliv.12.
5. Ibid. xxvi.9.
6. Ibid. xlviii.46.
7. Watters i, p. 178.
8. BS lxxiv.1; Ornaments, BS xliii.7.
9. Ibid. lviii.47; lxx.4; xliii.42.
10. Ibid. xliii.43.
11. Ibid. 44.
12. Ibid. 45.
13. Ibid. 46.
14. Ibid. 47. cf Altekar, Women, pp. 258 ff.
15. CII iii p. 82.
16. Ibid. p. 166.
17. ASIAR 1911-12 p. 92.

ornaments such as one gold ring, one hollow bead, two miniature gold beads joined together, a flat wheel of gold with axle and spokes and a disc of gold embossed with a human face.

Gold, silver and precious stones were the chief materials for the ornaments. Wearing of ornaments by the married woman was considered as auspicious.[1] Vatsyayana advises a wife never to appear before her husband without some ornaments on her person. The menfolk were not much behind women in their fondness for ornaments as is evident from the Gupta coins, sculpture and paintings. The metal-workers in general i.e., the smiths were designated as 'earning their livelihood by fire.[2] Heating the metal was the important process for casting etc. We have certain references regarding the various processes adopted by the goldsmiths such as heating in the fire for its purity,[3] melting,[4] whetting at touchstone[5] and hammering for testing its purity.[6]

Indians seemd to be in love with gold and gold ornaments.[7] Abundance of gold was always cherished. It was believed to be the best method of hoarding for the lean days. Though the modern economists decry such savings by the people in present times, Indians have not changed much from the past in their habits regarding gold despite the fact that

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1. Kama iv.1.13.
2. BS v.28,35,53,69; vi.1; viii.3; x.4.; xvi.12; xvii.13; xxiv.21.
3. Paritapa BS iii.36. Santapa Utpala. cf Raghu i.10.
4. Druta Kanaka BS i.1; xxviii.3.
5. BS ix.44; Utpala i.p.65.
6. Utpala i. p.65.
7. BS xxix.8.

hoarding tendencies are unremunerative and anti-national. This has become an inherent factor in Indian psychology. But during the time of our study when the banking and investment facilities were so few and unsafe, the aforesaid criticism can hardly be appropriate.

We have references to the increase[1] and gain[2] of gold as well as to the loss[3] and cheapness[4] of gold.[5] The gold-smith is by far the most popular among craftsmen in the society particularly women. They fashioned for them the latest designs in ornaments. The use of the gold was also extended to in fashioning crowns[6], idols[7], sacrificial ladles[8], thrones[9], weighing balances[10] and in covering bedsteads.[11]

The manufacturing of glass was widely undertaken[12] during the period which was mostly used as an article of toilet. It is difficult to ascertain whether it was used as a mirror. Kalidasa[13] refers to a mirror made of gold. It is generally held that highly polished metal plates of various designs were used as mirrors.[14] The ivory industry was very important in as much as it satisfied the growing needs of rich society of Gupta times in addition to a constant demand from

1. BS xxix.10.
2. Ibid. lxxxvii.2-3.
3. Ibid. 30.
4. Ibid. xxix.8.
5. Hiranyapanya BS v.74; Hairanyaka BS lxxx vii.32; Suvarnakara BS lxxxvii.30.
6. BS xlix.4.
7. Ibid. lx.4.
8. Ibid. xliv.12.
9. Ibid. xlviii.46.
10. Ibid. xxvi.9.
11. Ibid. lxxix.14.
12. Ibid. lxxxvii.23. cf xiv.37; xvii.26; xix.28,30; Kumara vii.26; viii.11.
13. Raghu xvii.26.
14. Mirrors are still manufactured at Aranmula in Travancore. DHI i pt.i p.12. cf Codrington, Ajanta Frescoes, IA 1930, p. 172.

foreign countries. India's ivory exports[1] date back to an earlier times and they remained large enough to rival Africa in international markets.[2] But the growing popularity of the ivory articles among the rich people of the Gupta society rendered the indigenous resources insufficient and to cope with the demand of such articles for home consumption and export ivory-tusk also used to be imported from foreign countries like Ethiopia where the elephants were said to be numerous and having larger tusks than those of the Indian elephants.[3]

The source of ivory is the tusk of an elephant. Elephants played an important part in ancient Indian society in military as well as economic set up. Elephant corps was an essential in Indian tra-ditional four-fold army. They served as conveyance for the king and in fiscal matters, a great commodity for trade and commerce.[4]

Ivory articles in general and ivory pegs[5] in particular have been mentioned by Varahamihira.[6] Kalidasa also refers to seats made of ivory. The value of elephants was determined by the amount of ivory they had.[7] The various types of furniture was ornamented by laying in pieces of ivory. It was highly commendable for decorating a bedstead made out of the auspicious wood.[8] Portions of the tusk particularly mentioned to be auspicious were utilised for inlaying purposes.[9] Four ivory seals have been found from Bhita belonging to about[10]

1. Indian Ivory work found among the ruins of Pompei in Campania. ABIA 1938 vol. xiii pp.1-5.
2. Jeannine Auboyer p. 81.
3. MoC Mag p. 165. 4. MS lxxxvii.9.
5. Ibid. liii.60. In the house of the Nagaraka the Vina is suspended to an ivory peg fixed on the wall. Kama i.iv.5-15 p.28 of MC ch.vii.
6. Brghm xvii.21.
7. MS xxvi.8.
8. Ibid. lxxix.19.
9. Ibid. 11-18.
10. ASIAR 1911-12, p. 48.

fourth and fifth centuries A.D.

Leather[1] was used for making various articles like containers[2] and shoes[3]. The tanners[4] are also mentioned[5]. Leather was possibly the monopoly of the State during the Gupta period[6]. The use of skins in sacred functions and also by ascetics and others was prevalent in our age. We have skins[7] of tigers, lions, oxen and wild oxen as mentioned by the astronomer. They are still used in India for similar purposes.

Salt is another commodity consumed largely in daily life. There are numerous references to salt which is denoted by the terms viz., Lavana[8], Ksara[9] and Saindhava[10]. Whether is was manufactured from saline water or rivers, lakes and seas or obtained from rocks, cannot be confirmed. There is, however, a reference[11] to the production of saline water from underground from which it can be anticipated that it might have been obtained from water. Saindhava denoting salt may indirectly be associated with the rocksalt available in the salt ranges across the Indus in Kohat in Pakistan. The

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1. BS xlii.6; lxvii.87; lxix.14.
2. Ibid. lxxxvii.8.
3. YY i.4.
4. BS ii.18; Utpala i. p.73. cf Amara pp. 167,207,228,232-33; IA 1930 p. 160.
5. Ibid. lxxxvi.8,35.
6. EI xv p.42; JASB (NS) xx p.59; CII iii pp.238,246; Majty p. 112.
7. BS xlviii.42-45; xli.4. cf Raghu iii.31; iv.65; Amara 8.54 p. 186; Kumara vii.37.
8. Ibid. x.8 ; xv.9; xvi.7; xxvii.4; xli.6.
9. Ibid. L.22; lxviii.16.
10. Ibid. Li.22.
11. Ibid. Liv. 104, 122.

Amarakosa[1] refers to these two types of salt also. The salt industry has also been mentioned in the records of the Vakatakas.[2]

TEXTILES: The textile industry seems to be well developed during the period. We have a number of references to the different varieties of cloths.[3] Karpasika (cotton) was the chief textile fibre used in the manufacture of summer clothing.[4] Its history can easily be pushed back to the Harappa Civilisation. But surprisingly enough the early Vedic literature does not make any mention of the cotton or its garments. The first ever reference to a garment made of cotton occurs in the Srautasutras of Asvalayana[5] and Latyayana,[6] though the Greek writers from Herodotus onwards speak of this textile product as peculiar to India.[7]

Ksauma made of linseed plant which is equivalent[8] to the Chinese Chu-ma (or Schou-ma), the name for grass cloth, was another textile product.[9] Profusely mentioned in the ancient literature is the Dukula variety of cloth manufactured from[10]

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1. 9,41,42 pp. 208,209.
2. JASB (NS xx p. 59; EI xv p.42; CII iii pp. 238,246.
3. BS xlviii.72; xcv.15. cf Sarkar, S.C., Some Aspects of the Earliest Social History of India, p. 68.
4. Marshall, Mohenjodaro and the Indus Valley Civilisation Vol i p. 53. cf Cotton cloth from Bairat ASIAR 1935-36 p.86.
5. ii. 3,4,17.
6. ii. 6.1; ix.2.14.
7. McC Meg pp. 120 ff; Invasion of India pp. 180 ff. cf Watt, Sir George, Commercial Products of India, p. 570.
8. BS xxvii.6; xlviii.50; liv.108; civ.61; BYY xvi.8. cf Artha ii p. 80; HC vii; HC A Cultural Study p. 168.
9. Gopal, L., Textiles in Ancient India, Journal of the Economic and Social History of the Orient, vol. iv pt i Feb 1961, p.57.
10. BS lxxii.1; BYY xvi.1. cf Artha ii p. 80.

the fibres of the tree of the same name.[1] In the Amarakosa, Ksauma and Dukula are identified with each other, the Dukula being the finest variety of linen cloth of which Ksauma was an ordinary variety.[2]

Silk industry was very popular in ancient India. The Amarakosa is very explicit on the technicalities of the details of silk industry. Silk fabrics were generally worn at the time of marriage,[3] but they were in common use by the upper strata of society. Cinamsuka is another name given to silk which apparently associates it with the Chinese, whence it must have come into India.

Various fabrics of silk such as Kauseya,[4] Patrorna,[5] Amsuka,[6] and Patta[7] were produced from the cocoons of silkworms in the age of Varahamihira, Netra being another such fabric mentioned by Utpala.[8]

Warm garments made of woollen yarns (Aurnika),[9] derived from the hair of sheep (Avika)[10] and goat (Kutupa)[11] were used as winter clothing. Among the woollen articles woollen blankets[12] seem to be very popular and the most sought after thing to which special references are made time and again in the works of Varahamihira.

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1. II.6.113.
2. JBORS iii.p.19. cf Moti Chandra, Pracina Bhartiya Vasebhusa, p. 147; Jain, J.C., Life in Ancient India as depicted in the Jaina Canons, p. 128 ff. 71.
3. cf HC p. 114; Ritu v.8; Kumara vii.3; Raghu xvii.25; Legge pp. 22,57,79; Mrc i p.16; CII iii p. 89.
4. BS xvi.29; civ.61.
5. Ibid. xvi.30. cf Artha iv.1.
6. Ibid. ii.14,17; lvi.6.
7. Ibid. lxxxvii.19. cf HC p. 114.
8. Utpala xvi.29. cf HC pp.22,53,114,116; Moti Chandra,op.cit. p. 157.
9. BS xvi.29; lxxxvii.12; civ.12,61; BKY xviii.9-10.
10. Ibid. xii.2,6; Li.19.
11. Ibid. xii.2.
12. Ibid. xii.8; xlviii.50,54; cf Narada i.63; Amara iii.132, p. 201; x.107 p. 224.

Dyeing of clothes was in vogue during the age as is evident from the references made to clothes coloured in yellow,[1] blue[2] and red.[3] But the people generally appeared in white[4] which was considered auspicious.

JEWELLERY The jewel industry i.e., Ratna Parikṣa was equally efficient during our time and was one of the most important items for internal as well as foreign trade. Kautilya[5] and Vatsyayana[6] are also very graphic about its popularity. Varahamihira mentions twenty-two different types of gems[7] which are enumerated as diamond, Vajra; sapphire, Indranila; emerald, Marakata; agate, Karketara; ruby, Padmaraga; carnelian (blood stone), Rudhirakhya or Rudhiraksa[8]; beryl i.e., cat's eye, Vaidurya; amethyst (garnet) Pulaka; Vimalaka (?); Rajamani; rock crystal, Sphatika; moon stone, Candrakanta; Saugandhika; opal (Hyacinth), Gomedaka; conch, Sankha; azure stone, Mahanila; topaz, Pusparaga; Brahmamani; Jyotiraksa; Sasyaka; pearl, Mukta; coral, Pravala.

Of these he describes only four kinds of gems viz.,[9] diamond,[10] pearl,[11] ruby and emerald[12] in detail. The exhaustive

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1. BS xliv.18; lviii.32; lxxxvii.25.
2. Ibid. lxxxvi.79. cf HC iv p. 143.
3. Ibid. lxxxvii.19. cf YY ii.1; xiii.[illegible] Pat 10,12. TY ix.15.
4. Ibid. xliii.30; xliv.15,24,27; lxxxvi.40; BYY xv.3; YY ii.25; xiii.11.
5. Artha bk ii ch.ii.
6. Kama i.3.16. For details see Finot, L., Les Lapidaires Indiens.
7. BS lxxx.4-5. cf Candesvara's Ratnapariksa ii.5-7. cf Watters I, p.150.
8. YY vi.3.
9. BS lxxx.6-13.
10. Ibid, lxxxi (full)
11. Ibid. lxxxii (full)
12. Ibid. lxxxii.1.

study of the selected gems may be due to the popularity they commanded during his times. The Amarkosa[1] supplements this view in as much as it also refers to only emerld, ruby, pearl and pearl-oyster, conch-shell (both of them regarded as mother of pearls) and coral. It is however difficult to accept the view that Varahamihira's account has come down to us in an incomplete form[2], for Utpala never speaks a word about this kind of tampering with this part of text.

Varahamihira has described varied types of necklaces such as the Inducchanda[3] comprising 1008 strings of pearls and four cubits long; Vijayacchanda[4], with 504 strings, two cubits long; Devacchanda[5], 81 strings, two cubits long; Hara[6] 108 strings; Ardhahara[7], 64 strands; Rasmikalapa[8], 54 strings; Cuccha[9], 32 chains, Ardhaguccha[10], 20 strands; Manavaka[11], 16 strings; Ardhamanaka[12], 12 strands; Mandara[13], 8 strings; Haraphalaka[14] 5 strings; Naksatramala[15], 27 strings; Manisopanaka[16], one string; Catukara[17], one string with a Taralaka gem in the centre; Ekavali[18], single strand and one cubit long. The length of these necklaces

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1. ix.92 p. 221; 23 p.65; 93 p.229; 111.133 p. 301.
2. Finot, L., op.cit., p. vii.
3. BS lxxxi.31.
4. Ibid. cf Artha p. 76.
5. Ibid. 32 cf Amara ii.6.105.
6. Ibid.
7. Ibid. cf Amara ii.6.106; Artha p. 76.
8. Ibid. cf Artha p. 76.
9. Ibid. 33 cf Ibid., Amara ii.6.105.
10. Ibid. cf. Ibid.
11. Ibid. cf Ibid.
12. Ibid. cf Ibid.
13. Ibid. lxxxi. 34.
14. Ibid. MASI no. 73 p. 57.
15. Ibid. cf Amara ii.6.106. ASIAR 1924-25; p.49; pl.xi.2.
16. Ibid. 35 cf Artha ii.11.
17. Ibid.
18. Ibid. 36. cf Amara ii.6.106. MASI no.73 pp. 57-58; HC, A Cultural Study, p. 198; Yazdani, Ajanta pls. v,x.

was generally two cubits and of those having one string, one cubit.

COSMETICS: Various kinds of cosmetics seem to have been manufactured on a commercial scale during the age. It was a specialised class of artisans engaged in the manufacture[1] of and trade in cosmetics for their profession (Gandhayuktijna,[2] Gandhayuktivid, and Kaschika).[3] The chemical processes employed in the manufacture of perfumes, like the dedoction,[4] heating,[5] mixing,[6] fumigation,[7] sprinkling[8] and combination[9] etc., as outlined by Varahamihira, further provide ample testimony as to the existence of an organised and well-knit trade run on scientific lines.

We have detailed references to the preparation of different kinds of scented hair-oils,[10] mouth perfumes,[11] bath powders[12] and talcum powder.[13] On the manufacturing these perfumes, Varahamihira is more exhaustive. We find a number of formulae for the preparation of compound perfumes,[14] out of which as many as 84 different scents could be extracted by various combinations and permutations.[15]

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1. B.S. xv.12.
2. Ibid. xvi.17.
3. Ibid. lxxxvii.41.
4. Ibid. lxxvii.2.
5. Ibid. 6.
6. Ibid. 12,16.
7. Ibid. 6,8,16,26,30.
8. Ibid. 27.
9. Ibid. 11-12, 16,26-27.
10. Ibid. 5-6. cf Agni ccxxiv.33.
11. Ibid. 27. cf Ibid. 34-38.
12. Ibid. 28.
13. Ibid. 12.
14. Ibid. 7,29-30.
15. Ibid. 29-30.

The manufacturing of various kinds of incense,[1] which must have been used on the religious ceremonies was also undertaken.

OCCUPATIONS: Other occupations mentioned are distillers,[2] Saundika; sellers of liquor; Madhvika-Vikraya, Rasa-Vikraya;[3] fishermen, Matsyabandha;[4] fowlers and hunters, Vyadha,[5] Pasika, Sakunin, Sakunika, Saukarika;[6] slaughterers, Shnk[7] Savnika; makers of bows, Dhanushkara;[8] conveyances, Yanakara[9] and bridges, Setukara; mechanics, Yantravid;[10] farmers, Langala-Jivin, Karsaka,[11] Krsikara, Krsikrd,[12] Krsirata,[13] Krsi-Jivin, Krsivala;[14] dealers in flowers, fruits and roots, Kusuma-Phala-Mula-Varta,[15] Malika, artisans, Karuka,[16] Silpin, Kala-Vidyas;[17] catchers of elephants, Dvipa-Graha; carpenter,

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1. BS xlviii.32; lxxvii.13-22; cf Utpala lxxvi.21-22.
2. Ibid. ix.34; x.18; lxxxvi.31.
3. Ibid. ii.5.
4. Ibid. x.8.
5. Ibid. xv.22; Kaivarta, xvi.32; xvii.17; ii.21; lxxxvii.7; Dhivara lxxxvii.34; Jalajajiva, xi.55.
6. Ibid. lxxxvii.10.
7. Ibid. xv.22; civ.63.
8. Ibid. lxxxv.31.
9. Ibid. xv.22; xvi.32; lxxxvii.34.
10. Ibid.
11. Ibid. iii.21.
12. Ibid. v.73.
13. Ibid. x.17.
14. Ibid. xv.18.
15. Ibid. xvi.17.
16. Ibid. iv.9.
17. Ibid. v.29,34; xv.2; xvi.8-12.
18. Ibid. xvi.6.
19. Ibid. xxxv.12.
20. Ibid. xxxiv.21.
21. Ibid. xxxi.4.
22. Ibid. viii.52; lxxxvii.23; lxxxix.4; civ.62.
23. Ibid. v.77; xv.17.
24. Ibid. ix.32.
25. Ibid. v.29; xxix.7; l xxxvii.32.
26. Ibid. xv.5,9,11; xvi.17; xxxi.3; xxxii.11; xxxvi.30; lxxxvii.42.
27. Ibid. xxxiii.19.
28. Ibid. x.9.

Takṣaṇa; oil-miller, Tailika; potter, Ghatakara, Ghatakrd, Cakerakara, executioners, Vadhika, Vadharata, Bandharata, Bandhana; mid-wives, Dhatri; sailors, Navika, Kaṇjivika, Naukarnadhara, Potaplava; soldiers; labourers, Karmin; physicians, Vaidya, Ayurvajna, Bhisaj; proclaimers, Ghausika; Surgeons, Salyahrd; bell-ringers, Ghantika, sellers of water, Vari-Jivaka, Vary-Upajivin; diviners, Iksanika; and carters, Sakatika.

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1. BS xliii.29; lxxxvi.20,24. Vardhakin, xliii.22. cf Kama 1.3.16.
2. Ibid. x.5; xvi.33.
3. Ibid. xv.1; Pat.9.
4. Ibid. xvi.23.
5. Ibid. x.9,12.
6. Ibid. xvi.22.
7. Ibid.
8. Ibid. xv.4.
9. Ibid. xvi.32.
10. Ibid. lxxviii.9.
11. Ibid. iv.8; ix.31.
12. Ibid. vii.6.
13. Ibid. xv.25.
14. Ibid. x.10.
15. Ibid. v.35;41; x vi.12; xvii.17,20,24; xxxii.11; li.21; lxxxvii.11,37.
16. Ibid. liii.109; lxxxvi.44.
17. Ibid. v.41; x.3; xv.26; xxxii.11; civ.61.
18. Ibid. xvi.27.
19. Ibid. v.30; vii.6;ix.32,43; x.8,16,17; xv.7,17; civ.61-62.
20. Ibid. x.30.
21. Ibid. v.30.
22. Ibid. x.6,12.
23. Ibid. xv.18.
24. Ibid. v.42. Salilopajivin xv.6. Female water bearers xcv.44.
25. Ibid. lxxviii.11; lxxxvi.32.
26. Ibid. x.4; xv.2.

INDUSTRIAL ART: The industrial art played a significant role in raising the standard of living of the people of the age. There were many articles of furniture and personal decoration which were used by all sections of the society. Varahamihira refers to umbrellas, clubs, goads, sticks, canopies, spears, banners, fly-whisks and clubs. The handles of these articles were coloured so as to denote the caste of the bearer. The Indra-dhvaja was another item made by skilled craftsmen.

FURNITURE: Fittings of articles of furniture within the houses were considered necessary for decoration purposes during the age. The rooms were strewn with flowers of the season and the walls were painted in various colours. The rafters and roofbeams were carved with strange figures. In the same way the windows and doors were also painted in different colours. The main hall and the other allied rooms were provided with seats and other articles of furniture.[1] Furniture, technically known as Sayanasana or Sayyasana,[2] was corresponding to Pali Senasana,[3] literally meaning bed-stead and seat.[4] Hence Sayya or Sayana furniture[5] was meant for lying and Asana[6] for sitting. We have also references to Khatva (cot);[7] Paryanka (couch);[8] Pitha (seat or stool);[9] Upadhana (pillow);[10] Bhadrasana or Bhadrapitha (throne)[11] and Sayanacchadana or Sayanastorana.[12]

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1. Watters i, p. 147.
2. BS lxxvii.1,5,18.
3. Ibid. Title of ch. lxxix and lxxix. 1.
4. Ibid. lxxxix.1,20; xciv.12; BY xxxii.13.
5. Ibid. lxxiv.1; lxxix.1,5.18,26; xlvi.22; lxxi.9.
6. Ibid. lxx.10; lxxi.9; lxxix.1,5,18; lxxxix.1.
7. Ibid. lxix.29.
8. Ibid. 22.
9. BY xxxii.13.
10. BS lx.7; lxxvii.15; BY xvi.3.
11. Ibid. xlvii.46-47; lx.7; BY xvii.7; YY vii.8.
12. YY xiii.11. 13. BS civ.8. 14. Ibid. 23.

Wood was the main material for construction of various kinds of furniture. Varahamihira refers to the trees such as Asana, Spandana, Candana (Sandal-tree), Haridra, Deodara, Tinduka, Sala, Kasmari, Anjana, Padmaka, Saka and Simsapa, approved for the construction of various articles[1] of furniture. These articles made of two or more kinds of timber were, no doubt, allowed but those made of single type were held as blessed.[2]

FORBIDDEN TREES: The trees[3] that are thrown down by thunder-bolts, water, wind and elephants; those in which bees and birds have taken up their abode; those growing in sacred spots, burial grounds, or roads; those that are withered at the top and those that are entwined with creepers; so also are thorny trees; those growing at the confluence of great rivers, or near temples and those that have fallen down in a westerly and southerly direction were considered as inauspicious and hence were branded as 'forbidden trees'[4] for the purpose.

The astronomer enumerates bad or good effects of the furnishings as according to the kinds of trees out of which they are made; the articles made out of 'forbidden trees' thus having the bad effects and those from the 'auspicious trees' producing favourable effects.[5]

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1. BS lxxix.2. cf VP x.80.
2. Ibid. lxxix.28,30. cf. Ibid. 90-91.
3. Ibid. 3-4.
4. Ibid. lxxiv.6.
5. Ibid. lxxix.11-13.

ITEMS OF FURNITURE:

Savvai The measurements of couches meant for the king, prince, minister, commander-in-chief and royal priests are mentioned[1] to be 100,90,84 and 72 digists respectively, the width being 7/16th of the total length and the height of the legs including the middle and top being equal to a third of the length of the couch.[2] It should be fashioned in Pradaksinagra order from left to right and not in Apasavyagra order which was supposed[3] to cause fear from ghosts. Special care was taken to avoid discrepancies, if any, in the supports as well,[4] which were divided into three parts - the upper part was called Kumba; the middle one Jangha; and the bottom part Khuri i.e., hoof.[5] The upper part i.e., Kumba designed possibly like a pitcher was referred to as Amalaka in the Buddhist literature and is depicted in some sculptures from Amaravati and Nagarjunikonda.[6] A big hollow or discoloured knot in these parts or occuring at a third of the length of the side-beams and cross-beams[7] was considered inauspicious. To enhance the beauty of the couch, it was further decorated with various designs of ivory inlaid in wood.

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1. BS lxxix.8-9.
2. Ibid. 10.
3. Ibid. 27. cf Utpala.
4. Ibid. 28.
5. Ibid. 29-31.
6. Sivarama Murti, Amaravati Sculptures in the Madras Government Museum, p. 136 pl.xii figs 1-2; Naik, A.V., Studies in Nagarjunikonda Sculptures, Bulletin of the Deccan College Research Institute, 11 nos 1-2 p. 291.
7. BS lxxix.29-31 and for its effects 32-37.
8. Ibid. 10.

Bhadrasanam It was a royal seat fashioned from gold, silver, copper or milky tree, between 1¼ and 1½ cubits in height, as may be appropriate for a Mandalika, Anantarajit[1] and Samasta-Rajyarthin.[2] It was also called Bhadrapitha. In ceremonious ablutions, i.e., Pusya-snana, Vijayasnana,[3] Nakshatra-Vijaya-Snana, the king sat on a Bhadrasana placed over the skins of certain animals. It appears from the Ramayana[4] that it was considered an ensign of royalty and carried by the attendant in front of the king.[5]

Paryankah From the manner of its mention,[6] a Paryanka seems to denote a seat. Paryankas were usually made of timber of a single tree. The costly Paryanka meant for royal use was fabricated entirely from sandal wood,[7] covered with gold and decked with variegated jewels. According to the Manasara, Paryanka is of nine varieties on account of its width ranging from 21 to 37 digits, with successive increase of 2 digits each.[8]

Pitha: Pitha or Pithaka is probably corrupted from pi-sad to sit upon, hence means a stool, seat, chair, throne, pedestal or altar.[9]

Other articles of furniture referred to by other contemporary writers are Vetrasana (cane-chair)[10], Manca(bench)[11] and Talpa.[12] Hiuen Tsang gives a very graphic description of the various articles of furniture used during his time which

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1. BS xlvii.46,47. cf EHI 1 pt I p.30.
2. YY xlii.11.
3. BS xlviii.46-47; BY xvii.7; YY vii.8. cf HC vii. pp. 272-74.
4. ii.26.17.
5. cf Raghu xvii.10.
6. BS lxxxix.11-14.
7. Ibid. 16. cf Acharya Architecture p. 62.
8. Mal p. 16. 9. Acharya, Dictionary p. 340.
10. Kumara vi.59. 11. Raghu vi. 1-3.
12. Ibid. v.75; xvi.6.

coincidentally are corresponding to the account of Varahamihira. Hiuan Tsang remarks: "for seats all use corded benches. The royal families, the officials, and gentry adorn their benches in different ways, but all have the same style (or form) of seat. The sovereign's dais is exceedingly wide and high, and it is dotted with small pearls. What is called the "Lion's seat" (i.e., the actual throne) is covered with fine cloth, and is mounted by a jewelled foot-stool. The ordinary officials according to their fancy carve the frames of their seats in different ways, and adorn them with precious substances."[1]

OTHER ARTICLES

Pattai[2] Royal crowns. Varahamihira describes five kinds of crowns. The crown of a king had an expansion of eight digits in the middle; that of the Queen, of seven digits; that of the Yuvaraja, of six; that of the commander of the army, of four; and that of the royal protege, of two digits. All these crowns are made of pure gold and have a length double their respective expansion, while the expansion on the sides is half that of the middle.[3] The number of crests of a royal crown are five; that of the Yuvaraja and the queen, three; that of the commander, only one; and that of the royal protege is without any crest.

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1. Watters, 1. pp. 147-48.
2. BS xlix.2-3.
3. Ibid. 4.
4. Ibid. 5.

Chatra: Umbrella. To ward off the heat of the sun during the months of the summer and cold during the winter, Umbrellas of various kinds and varieties were used. But the umbrella of the king was regarded as an ensign of royalty.[1] It also indicated the position of the individual in the body politic of the state. The King's parasol was of white colour made of the feathers of swans, cocks, peacocks and or cranes and covered all-round with a fresh, white silken cloth and adorned with pearls and had garlands of pearls suspended all-round from its edges. Its handle was made of crystal and rod that of a single wood six cubits in length, covered with pure gold with seven or nine joints, the extent or diameter being 3 cubits and was well-knit all over and adorned with gems.[2]

The rod of the umbrella of a Yuvaraja, Queen, Commandant of the army and a Bandumayaka was 4½ cubits in height and 2½ cubits in extent or diameter.[3]

The umb-rella of other officers of the State was made of the peacock feathers having wreaths of gems hanging all-round; its top being adorned with gold fillets as a token of royal favour.[4] The umbrellas were generally held by the attendants who were represented in art as dwarfs. The umbrellas of ordinary persons were of square form which were mostly used for protection against cold and heat and those of Brahmanas circular and had a cylindrical rod.[5] Umbrellas

1. BS 1[1]1.18; xvi.23; xliii.63; xliv.27; lx viii.45; lxx.10.
2. Ibid. lxxiii.1,2,3.
3. Ibid. 4.
4. Ibid. 5.
5. Ibid. 6.

were also used in religious ceremonies.[1]

Camara: Chowries.[2] The chowries were made from the hair of the tail of the Camara deer found in the caves of the Himalayas having yellow, black and white colours. The handle of the chowrie must measure one cubit or one and a half, or even a smaller cubit (with the first closed). The handles were constructed from the auspicious wood and decked with gold or silver. The handle of the chowrie for the king was set with all kinds of gems also which was regarded as an emblem of royalty.[3] The colours of the handles of the chowries of Brahmanas, Ksatriyas, Vaisyas and Sudras, must be yellow, yellowish-red, honey colour and dark respectively. The chowries which had gloss, tenderness, density of hair, brightness, whiteness and being connected with a slender bone, were recommended. An even number of joints in the handle was considered to be disastrous to the owner, while an odd one was favoured.[4] The chowries were included in the tariff list also.[5]

Swords: Different types of swords were shaped like a cow's tongue, blue-lily petal, bamboo-leaf and Karavira leaf, as well as those having a pointed and round tip.[6] The length of the swords vary from fifty digits to twenty-five digits - the former being the best type and the latter, the smallest.[7]

The sword which was sharp, appealing to the eye and the mind, without breaches, not too short, smooth at the top,

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1. BS xliii.7 57; xlvi.31;xlviii.73; xlx.2; lxxix.21.
2. Ibid. lxxii.1-4.
3. cf BS iii.18; xvi.23; xliv.24; lxx.10.
4. Ibid. lxxii.5-6.
5. Ibid. xliii.7.
6. Ibid. 1.7.
7. Ibid. 2.

and with resonance sound, was generally recommended.[1]

Different methods were available during the period to sharpen the blade of a sword, for specific purposes.' For instance, for cutting the trunks of elephants, a drink made out of fish-bile, deer-milk, mare-milk, and goat-milk, mixed with toddy of palm trees, was prepared for the bathing of the sword to make it fit and strong for the purpose, for its use against the stones and rocks - the sword duly rubbed with gingelly oil and smeared with an unguent prepared with the milky juice of Arka plant, the cleaned powder of goat's horn and the excreta of doves and mice, was given the above mentioned drink to make the whetted unbreakable, and against iron and other hard materials, a solution out of burnt powder of plaintains mixed with butter-milk was prepared and after having given a bath of solution, it was sharpened properly. Such a sword does not become blunt when used against iron or hard rocks. " The tempering of steel in a manner is worthy of advanced metallurgy, a process to which the mediaeval world owed its Damascus swords. It was this applied chemistry much more than handicraft skill which gave India her premier position in the middle ages and earlier in exports and manufactures."[2]

Indra-Dhvaja: Indra's Banner. Indra-dhvaja was the victory-banner and held in a very venerable place in the minds

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1. BS L. 24-26.
2. Seal, B.N., The Positive Sciences of the Ancient Hindus, p. 66.

of the citizens of a country which can be compared with the national flag. This flagstaff was made with precision and accuracy by skilled craftsmen.[1] The divine origin of this flagstaff has been traced by the astronomer.

The banner was made of wood that was held auspicious. The approved trees, the wood of which could be used for this purpose[2] are that of Arjuna, Ajakarna, Priyaka, Khava and Udumbara. The 'forbidden' trees as already discussed were not used for making the banner.

Varahamihira gives a very lengthy description of the chopping of the tree for making the standard, its decoration, raising and the retreat, with due observance of special rituals and ceremonies connected there-with.[3]

1. BS xliii.1-10.
2. Ibid. 15.
3. Ibid. 20-68.

SECTION VII

TRADE AND COMMERCE

Commercial activities backed up by the industrial products and handicrafts played an important role in the lives of the people of towns and villages alike. Roads were a prerequisite to the development of trade and commerce. Road-building activities connecting different parts of India had been completed in the so-called Buddhist India which resulted in the network of roads in Uttarapatha and Dakshinapatha. The Mauryans took these roads further to the borders of India joining them with the trading posts on the international routes plying through Central Asia and Middle-east terminating on the European soil. South India opened new horizons through her ports and established naval communications on one hand with the countries of the Persian Gulf and East Africa and on the other with South East Asian countries[1] terminating on the Chinese coast.

The internal and external trade and commerce reached optimum under the Guptas. Through her favourable geographical position, India became a cynosure of inter-national commerce. "The emperors and kings of India found it greatly in their own interest to encourage this international trade, since the substantial taxes levied on all goods in transit helped to swell the treasury's coffers and raise the general standard of living."[2]

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1. Cf. Cosmas, xii (McCrindle, Ancient India, pp. 161-62).
2. DLI p. 70.

ROUTES AND CARAVANS: The highways and other roads[1] were shaded from the heat of the sun by trees planted along their edges.[2] The rivers on the routes of these roads were bridged.[3] Basham,[4] however, holds that the larger rivers were not bridged, but ferry services were available at every important crossing. The principal towns and cities like Mathura, Ayodhya, Hastinapura, Mithila, Kasi, Tamralipti, Vardhamana, Puri, Varanasi, Nasik, Kanci, Taksasila, Puskalavati etc. situated in the different parts of India, were connected by roads. The coast line of south India was dotted with ports for the purposes of import and export of commodities, especially in Maharastra, along the west coast, in the Tamil land, on the Malabar coast and in Andhra and Bengal.

Tamralipti[6] was the principal port of Bengal which carried on an extensive trade with Ceylon on the one side and China, Indonesia and Indo-Chinese Peninsula on the other side. It was situated in ancient Suhma, the maritime activities of which are presented in the Dasakumara Carita.[7]

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1. BS xxviii.5; liii.76; lxxix.3.
2. Ibid. xliii.13; lix.2. The wood of the trees planted on the roads was not considered auspicious. cf. Rama Ayodhya lxxx.5 ff.
3. Setukara is the term used for the constructor of the bridges (BS xv.18) other references to the bridges are: BS xvi.17; xix.12; xxviii.5.
4. WTI p. 224. Construction of bridges on the high roads by children referred to by Varahamihira (BS xxviii.5) suggests however that the civil engineering was quite popular and hence efficient.
5. Cf. Raghu's voyages and the "Cloud's" route testify the prevalence of such routes. Meghaduta; Raghu,v.41 ff. See also VGA p. 329; WTI pp. 223-24.
6. BS xiv.7. cf Legge pp. 111-13.
7. pp. 155 ff. cf NSP 1951 pp. 12 ff; 215 ff.

Commerce was supplied by the well organised merchant caravans.[1] Sartha was the term denoting a caravan. The constitution of such an organisation, as revealed by Varahamihira was based on the pseudo-democratic conception. The members of the guild[2] were the merchant-caravans who elected the senior-most[3] member as their leader (Sarthavaha[4] or Sartha-pradhana[5]) before the beginning of the expedition. The elected leader must be of high birth, good learning and who had had wide experience of this kind of expedition. The caravan leader was an important figure in the Varahamihira's times as revealed by the contemporary inscriptions. He was the member of Adhikarana[6] (district local body). A caravan-merchant named Dodda[7] is mentioned in a seal recovered from Basarh.

The routes of the caravans were not without dangers especially which plied through the forests and the wooded country where organised bands of brigands held up the caravans and looted their belongings which sometimes caused a utter ruin and loss of wealth to caravan traders.[8] They did not even spare the Chinese innocent monks Hiuan Tsang and I-Tsing.[9]

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1. BS lxxxvii.39.
2. Ibid. lxxxvi.11.
3. Ibid. iv.13; lxxxvii.14. cf EI xv. pp 130,133,138,142; xx p. 61; Mala Act v.
4. Ibid. lxxxvi.11.
5. Ibid.
6. EI xv. pp. 130,133,138-139.
7. ASIAR 1903-4 p. 101 pl. xii.
8. BS lxxxvii.39. The Jatakas are full of such stories of banditry. See WTI p. 225.
9. Sarkar, S.C., Some Aspects of the Earliest Social History of India pp. 15 ff. cf. Artha i.21; ii.4. See also Rama Ayodhya lxxx.5 ff. For representations of such people see MASI no.55 pl. xlix. and Yazdani, Ajanta i. pl. xxxv.

The miseries and misfortunes of such a looted caravan are given pathetically by Kalidasa in the Malavikagnimitram.[1] The Harsa Carita[2] gives a detailed account of the life of a chief of robbers living in the Vindhya Mountains. Pali literature refers to the professional caravan guards who looked after the safe conduct of their journey.[3] The king also guaranteed their safety through his territories by safe-guarding the roads.[4]

Sresthin[5] was another important figure in commercial dealings. He was not merely a money lender or banker but usually a merchant as well.[6] During the Gupta times he was the member of the local advisory council of the district.[7] Some seals recovered from Basarh mention Sresthin along with Sarthavaha and Kulika constituted a nigama (corporation).[8]

FOREIGN TRADE: Foreign trade was carried on by sea and land. Numerous references in the texts of Varahamihira mention people living in foreign countries. Likewise, we have many references to the prosperity and adversity of seaborne trade, water-routes, ships, sailers and seafaring vessels and merchants.[9] South India as the home of the

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1. Act v.
2. pp. 231-32.
3. WTI p. 225.
4. Raghu xvii.64,66; Artha p. 108.
5. BT xxix.10; xxxii.25; lxxxvi.34. It is the same as Seth in modern times in north India and Chhetti or Setti in South India. For details see Fiser, Ivo, the Problem of Setthi in Buddhist Jatakas, Archive Orientalni xxii. 1954 pp. 238-65; JRAS 1901, p. 865.
6. WTI p. 222.
7. EI xv. pp. 130, 133, 138-39.
8. ASIAR 1903-4, p. 110 pl. xli, xlii.
9. XX iv. 52.

mariners[1] has been aptly referred to by Varahamihira. Being open to sea the Peninsular India took to seafaring trade from the time immemorial. It was regularly trading with the South Asian countries on the one hand and the west on the other hand.

The accounts of Pliny, the Erythrean sea, and other Greek writers of the early Christian era testify the briskness of the trade being carried on from the well-established ports of both eastern and western coasts. Trading during Varahamihira's times did not decrease in any way. The accounts of Cosmas, Fa-Hien, Hiuan Tsang and I-Tsing along with the archaeological finds of the Greek coins and other material confirm the view that Indian trade was going on with the same pace both by sea and land routes. The briskness of trade on the Indian ports can be well testified by the statement of Varahamihira[2] that the seashore was over-crowded with ships (naturally from foreign countries) that have arrived safely laden with costly things.

India was famous for the quality of its precious stones and pearls. Though large-scale pearl-fisheries existed in India,[3] pearls were imported into this country from Ceylon and Persia.[4] The Ceylonese pearls were multishaped, glossy, swan-white and large.[5] Indian trade relations were intimate with Ceylon during our period which can be traced

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1. BS xiv.14.
2. Ibid. xlviii.12. cf Shastri, K.A.N., Foreign Notices, p.89.
3. BS lxxxi.2.
4. Ibid.
5. Ibid. 3.
6. See Cosmas xi. pp. 363-65; Legge pp. 111-13; Codrington, Ceylon Coins and Currency, p. 16; Mahavamsa xxi. 10.

back to a very early time.[1] Fa-Hien[2] refers also to the pure and brilliant collection of pearls from the sea of Ceylon. According to Cosmas[3], Ceylon imported from India, silk, aloes, cloves and sandalwood from the Male (Malabar); copper, sesame and cloth from Calliana (Kalyan, near Bombay); musk, castor-oil, spikenard, from Sindhu and other imports included elephants and horses. Likewise, Ceylonese goods were received by India, out of which pearls were an important item.[4] Cloth was also imported to India.

The Persian pearls received by India were brilliant, clear, heavy and very valuable.[5] Procopius mentions Indian trade relations with Doubios, a district in Persarmenia. And further informs us that the monopoly of the silk trade with West was in the hands of Persians, who used to buy silk from their Indian neighbours.[7]

India's trade relations with China were also on the increase. Both sea and land routes were used. Regular ship-service between Indian and Chinese seaports was in progress.[8] Merchant ships plied between these countries were carrying not only commercial commodities but missionaries also.[9] Many Indian Buddhist missionaries went from India to China during our period. A greater number of Chinese pilgrims and

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1. Mahavamsa xxi.10; Valahassa Jataka vol. ii no. 196.
2. Legge p. 101.
3. xi. pp. 363-67, 371-72.
4. RT i. 294-97; ASIAR 1905-06 p. 144; cf Schoff p. 47.
5. BS lxxxi.5.
6. Procopius ii. xxv.2-10 (vol.i. pp. 478-81).
7. Ibid. i. xx. 9-12 (vol. i, p. 193).
8. Legge p. 101.
9. For details see India and China.

Buddhist scholars also visited India to pay their homage to the Buddhist shrines and other sacred places.

India's commercial activities in South East Asia entered a new chapter. We learn from the inscriptions and archaeological finds supplemented by the Chinese accounts that almost all the countries of the Indo-Chinese Peninsula had been Indianised and there was a flourishing trade and commerce between India and these countries during the time of Varahamihira.

The commercial relations with the Roman empire were no less important during our period. The discovery of Byzantine coins of the 4th, 5th and 6th centuries A.D. in Southern, Western and Eastern parts of India testify the continuance of trade relations between the two countries.[1] In his Law Digest, Justinian includes a number of Indian products in his long list of imported merchandise in connection with his regulations on custom duties. Indian embassies to Justinian Court in A.D. 530 and A.D. 552 further confirms this view. The chief imports of the Romans from India were the spices and silk.

Ethiopia and Arabia were also in regular maritime relations with India according to Cosmas. Ivory, emeralds and were exported to India from Ethiopia.[2] From Barbaria in

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1. Sewell, JRAS 1904, pp. 591-637.
2. Corpus Juris Civilis. vol. 1. Institiones Digesta etc. pp. 606; Digestae xxxix,4,16,7.
3. Cosmas xi. p. 371-72.

Ethiopia many kinds of spices, frankincense, cassia, calamus and many other articles of merchandise were imported into the country of the Homerites, to further India and the Persia.[1]

And Arabia (Vanayu)[2] supplied the horses to the Indian markets. Kalidasa mentions an excellent breed of the Vanayu steeds in use in India. Kamboja also supplied horses.[4]

The effect of the foreign trade was tremendous on Indian economy, which resulted in an unprecedented rise in Indian wealth. India played an important part in the cultural life of the people of South East Asia. The religious life of the Chinese was moulded to a greater extent by Buddhism, which enjoyed a respectable place in the T'ang dynasty. The Central Asian countries played no less an important role in transmitting Indian culture abroad.

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1. Cosmas ii. p. 51.
2. Day p. 22; Cunningham places Vanayu somewhere in the north west of India (CAGI p. 97).
3. Raghu v. 73. cf Artha bk ii. ch. 30.
4. Raghu iv. 69-70.

SECTION VIII

LABOUR AND SLAVERY

Three kinds of labour - slave, hired and forced - obtained since the ancient times. These institutions of labour have played a significant role in the economic and social life of all the ancient nations, India being no exception to it. Similar classification of labour finds mention by Varahamihira. He refers to both the male and the female slaves known as Dasas and Dasis,[1] in clear terms. But peculiarly enough, the early classical writers maintain that the Indians did not use aliens as slaves, much less a countryman of their own.[2]

Literary and other evidences, however, clearly disclose the existence of slavery in India since the time of the Rgveda. We find that in the Vedic age the prisoners of war were often reduced to slavery; a person could be the slave of another man voluntarily; the slaves included both males and females; and the slaves were the chattels of masters who could dispose them off e.g., by gift etc. according to will.[3] Asoka made two important announcements, in his edicts, regarding the right treatment of the slaves and servants.[4]

The problem of the slaves has been so exhaustively treated by Kautilya, Manu, and the Smrtis written before, during

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1. BS ix. 21; lxxvii.2; lxxxvi.15,39; BJ xxiv.3.,
2. McC Mag p. 71; Ghoshal, The Beginnings of Indian Historiography and other Essays, Calcutta, 1944 p. 85.
3. SLI p. 140.
4. RE ix; PE vii.

or after the Gupta period as to prove the gravity of the situation arising out of the practice of slavery. The comparative study of these accounts, however, shows that their lot differed in different periods.

According to Kautilya,[1] the rights of the slaves were guarded, they were allowed to inherit property and could buy their own freedom under certain circumstances. Whereas the conditions of the slaves deteriorated in the post-Maurya period when they could not own property at all.[2]

During the times under review, the lot of the slaves improved again and they were allowed to own and inherit property.[3] Yajnavalkya[4] not only observes the same way but also refers to the extension of slave law to include the Kshatriyas and the Vaisyas for the first time in the Indian society, which brought about a revolution in the social set-up. References to slavery are also found in the Mrechakatika, a drama of the Gupta age, which partly confirm and partly supplement the data given in the legal texts.[5] We have also references to it in the works of Katyayana[6] and Bana[7] which is again confirmed by the epigraphs of the age.[8] This should suffice to suggest that the existence of slavery during the period under review cannot be denied.

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1. Artha p. 182.
2. Manu viii. 416.
3. Yaj ii. 133-34; BJ ix.21.
4. Ibid. 183; cf Manu (viii.412), Kautilya (pp.181-82) and Visnu (v.150) are against this injunction.
5. Cf. CA p. 559.
6. verses 715 ff.
7. HC pp. 206-7.
8. CII iii. p. 35.

For the matter of the views expressed by classical writers it can well be suggested from the above account that the slaves were not having a miserable existence in India as in many other lands during the ancient period. They were patronised by the people, the nobility and the royalty in ancient India.[1] There were no restrictions on their movements. It might be because of the treatment meted out to the slaves that the early classical writers could not distinguish them from the ordinary people.

Varahamihira has made a number of references to the 'hired labour'[2] which include the domestic servants, whose number seem to have been very large. There are also references to persons having numerous servants;[3] hired servents(Bhrtaka,[4] Bhrtya,[5] Preasya);[6] shepherds and cowherds;[7] grooms;[8] elephant drivers;[9] charioteers;[10] messengers;[11] diggers of wells;[12] carriers of loads.[13] These hired labourers are also called persons working for others,[14] who earn their livelihood by servile work or craft.[15]

Free forced labour (Visti) was also prevalent during the times of Varahamihira which can further be testified by a number of contemporary epigraphs.[16]

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1. Legge p. 43.
2. BS v.34 (Devaka); xv.5,30.
3. Ibid. lxix.36; ci.6; BJ xvi.6.
4. BJ x.1.
5. BS v.69; lxix.36; ci.6; BJ xvi.6; xvii.12.
6. Ibid. xlvi.13; li.26; lxvii.26; BJ xix.1.
7. Ibid. xv. 32; xvi.13; v.36; xli.5; lxxxvi.30; civ.61.
8. Ibid. x.3; ix.36.
9. Ibid. ix. 28; xv.11,19; xvi.26.
10. Ibid. x.10; xv.11; lxxxvii.20.
11. Ibid. x.10; xv.3; xix.13; lxxxvii.9; lxxxvi.8.
12. Ibid. ix.30.
13. Ibid. v.42; lxxxvi.24.
14. Ibid. cxviii.26,36; BJ xviii.1.
15. BJ xviii.11.
16. EI viii. p. 36.

SECTION IX

CORPORATE ECONOMIC LIFE

The organisation of trade and industry in guilds, śreṇi, has been an important aspect of ancient Indian economic life since very early times which continued to run on the same lines as before in the time of Varahamihira[1] as well. There were different kinds of guilds and corporations during our period as revealed by the contemporary inscriptions and seals. There were organisations not only of producers and manual workers like weavers, oilmen and stone-cutters etc.,[2] but that of merchants and bankers also.

The guilds played an important part in ancient Indian economic as well as cultural life. They performed various duties including that of a bank and the interest of money deposited by people was spent by the guilds on religious endowments and pious acts.[3][4]

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1. BS x.13; xxxiv.19. For its organisation see SI p.284 fn.6; EI xv.pp 130,138,138-39; xx.p.61; LGA p. 366.

2. CII iii pp. 70,81 ff; EI xxx. p. 59; xxiv.56; ASIAR 1903-4 pp. 101 ff; ASWI iv. p. 96.cf Raghu xvi.38, refers to a Guild of Architects.

3. EI xxi. p. 89; CII iii.pp.38,40-41,70; ASWI iv. pp.102,104.

4. CII iii. p. 80.

CHAPTER III

GEOGRAPHICAL DATA

SECTION I

INTRODUCTION

Indian geographical lore expanded in course of the historical evolution. We have lot of evidence to determine the range of the geographical horizon of the Indians in the Gupta period. The geographical outlook of this age is telescoped in the works of Varahamihira which embody in an encyclopaedic manner, the vast mass of knowledge accumulated in that age. Varahamihira's view regarding the ancient Indian geography is different from that of the Puranas. It may be noted in passing that the history of Indian geographical lore of the Puranas[1] can be divided broadly into three periods: Caturdvipa, Saptadvipa and Navadvipa or Astadasadvipa.

The geography of the first and the second periods had a continental character betraying a north and central Asiatic outlook whereas the geography of the third period had a trans-oceanic orientation and is based upon the geography of the South East Asia.

The Puranic conceptions have been reorientated and amalgamated into one in the account of Varahamihira. The horizons of his geography of India not only include Central Asia but also the regions of South East Asia. The cultural

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1. Buddha Prakash, India and the World, 1964, pp. 39-73.

expansion into Central Asia which started during the Mauryan and Kusana periods continued with unabated strength in the Gupta times. Buddhism attained a definite footing in China as well. Sten Konow's[1] investigations in the Tibetan literature have shown that Khotan was colonised by Indians and ruled by Indian chiefs. Kuci (modern Kuca) was another flourishing centre of Indian[2] culture. The recent ex-plorations[3] in the Chinese Turkistan and Afghanistan[4] have revealed the existence of a large number of flourishing cities with rich sanctuaries. That the Indian culture was flourishing in the Gupta period in the same degree, is attested by the impressions of Fa-Hien and Hiuan Tsang who visited these regions in the fourth and seventh centuries respectively. The activities of Indian missionaries[5] in China during the fourth, fifth and sixth centuries A.D. coupled with their simplicity, discipline and piety, aroused in the Chinese people, a great zeal for Buddhism. In short, the Indians were well aware of their neighbours in the north and the north-west.

From the commencement of the Christian era, Indian culture tends to spread towards South East Asia. The sea began to dominate Indian thought, as much as, if not more, than the land. The Chinese sources belonging to the early centuries of the Christian era confirm the existence of

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1. JRAS 1914 pp. 344 ff.
2. Ibid. pp. 959 ff; India and Central Asia, pp. 67 ff.
3. See Stein, A., Ser India and Inner Most Heart of Asia.
4. See Tucci. G., Preliminary report on two scientific expeditions in Afghanistan, and Travels of Tibetan pilgrims in the Swat Valley.
5. For details Bagchi, P.C., India and China.

regular intercourse between India and South East Asian regions[1], which is further testified by archaeological evidence[2]. The Chinese traveller Fa-Hien gives a vivid description of the flourishing condition of Indian culture in South East Asia. Fa-Hien's impressions are confirmed by I-Tsing who visited the regions towards the end of the seventh century A.D.[3]

This short survey leaves no doubt in our minds that the spread of Indian culture in Central Asia as well as in South East Asia was brisk and continued with the same pace throughout the Gupta times. Hence a more upto date and systematic treatment of the geography of India was very necessary.

The conceptions of the Puranas, mentioned above, became out of date and required a revision in the light of new perspectives. A more comprehensive scheme was drawn, emphasising equally on the north west and south east Weltanschauung, by Varahamihira in order to cope with the need of the time.

Varahamihira uses[4] term 'Bharatavarsa' to denote the

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1. Wheatley, P., Golden Khersonese, pp. 17,28 and 39.
2. Cf. Buddha Prakash, BVB vol. xx-xxi, 1960-61 p. 244.
   Coedes, C., Les etats hindouises d' Indochine et d' Indonesie, p. 40. See also -
   Quatrich Wales, H.G., The Making of Greater India;
   Majumdar, R.C., Hindu Colonies in the Far East, and Suvarnadvipa, 2 vols. ;
   Chatterji, B.R., Indian Cultural Influence inCambodia, India and Java;
   Shastri, K.A.N., History of Sri Vijaya, South Indian Influence in the Far East;
   Chhabra, B.Ch., Expansion of Aryan Culture.
3. Hindu Colonies in the Far East, Calcutta, 1963, p. 30.
4. BS xiv. 1.

India. The derivation of the term of Bharatavarsa has been differently interpreted by different writers. Some hold[1] that the term was derived from the celebrated Bharata people who played an important role in the political life of India[2] in the Vedic and Epic times. While some of the Puranas points out that it was from king Bharata, the son of Rsabha,[3] a descendant of Svayambuva Manu, according to others it is derived from Manu who himself was styled as Bharata. Bharata, the younger brother of Rama, the hero of the Ramayana, is also associated with the origin of the name Bharatavarsa. Yet there was another king of this name, the son of Sakuntala and Dusyanta, who is counted amongst the great Imperial rulers of India (Cakravartins), and according to a generally accepted view the name is derived from this last Bharata.

Varahamihira[4] divides India into zones as follows:

a. Madhyadisa, Central zone;
b. Purvadisa, Eastern zone;
c. Agneyyadisa, South Eastern zone;
d. Daksinadisa, Southern zone;
e. Nairtyadisa, South Western zone;
f. Aparadisa, Western zone;
g. Pascimottaradisa, North Western zone;
h. Uttaradisa, Northern zone; and
i. Ksanyadisa, North Eastern zone.

Varahamihira's idea of the nine divisions as already mentioned is different from that of the Puranas. It is linked up with his conception of the nine planets governing

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1. Raychoudhari, H.C., SIA p. 77.
2. Mark liii.41; Bhagavata xi.2.15 ff; Vayu ch. xxxiii; Garuda ch. liv.
3. Mat cxiv.5; Brahmanda xlix.10; cf Patil, D.R., Cultural History from the Vayu Purana, p. 262; AI i. 295.
4. BS ch. xiv.

the furtunes of the different regions. For this purpose, he has divided the India of his conception into nine divisions, each of which has its fortunes determined by the position of the planets vis-a-vis the twenty seven lunar mansions.

It is very significant to note that the chapter under which the geography of India is described, is named Kurmavibhaga[1], implying thereby that the 'globe of the earth'[2] is likened to the 'Back of a tortoise', the central zone of which being the India proper. Almost all the Puranas betray the knowledge of Kurma interpreting it as a globe.

There is a general tendency with some of the writers[3] who hold the view that Varahamihira borrowed the chapter on geography almost verbatim from Parasara, who must have flourished not later than the first century after Christ. The text of the Parasara-tantra as quoted by Utpala in his commentary[4] on the Brhat Samhita is similar in plan to that of Varahamihira. But to regard the Astronomer's list as borrowed verbatim from Parasara will be a hasty conclusion. We feel it, therefore, to investigate into the point more deeply.

The lists of Varahamihira and Parasara agree fairly well and they have much in common, but on closer

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1. In S. Dvivedi's ed. it is mentioned as Naksatra Kurmadhyaya.
2. For details see Kern JRAS 1871 p. 81 fn.1; Fleet IA xxii. p. 139; AI i. 296-97.
3. Kern Introduction to the BS pp. 32 ff; CAGI p. 157; for other views see ESAI pp. 11 ff.
4. pp. 286-94.

examination the differences in their texts are so many that they cannot be overlooked. The text of Parasara is very insufficient, for instance in the north eastern division, Varahamihira enumerates as many as 35 names including the mountains, rivers, cities, countries and peoples whereas Parasara's list contains only 27 names. A similar position obtains in the number of names of other divisions. The Parasara's list is also defective in as much as the names of certain regions are incorrectly given e.g. in the list of the Central zone, we have Umaranya instead of Dharmaranya; Lopamandavyas in place of Mandavyas and Uttamajyotisas instead of Upajyotisas and so on and so forth.

From this account it cannot be said with a measure of certainty that he borrowed this chapter verbatim from Parasara, but it cannot also be brushed aside once for all that Varahamihira compiled this chapter independently. Undoubtedly the Parasara-tantra is the only text coming down to us which compiled the geographical lore in the same pattern as Varahamihira does. Thus Varahamihira would not have been left uninfluenced by it. It may here be conceded that the former must have consulted the text of Parasara, his forerunner, to which he gave an independent interpretation.

However, there are some discrepancies in the description of Varahamihira which cannot be overlooked, for instance, though he places Kaccha and Girinagara both in the Southern division, he locates Raivataka in the south west, which actually cannot be separated from each other for Girinagara and Raivataka are contiguous, both lying considerably to the south of Kaccha.

Varahamihira describes also a few countries of the northern and north western zones, in the north eastern division which may be overlooked due to the fact that he placed the north eastern region taking the central zone as the centre of India. But even then there are many grave handicaps, for instance, Meru is placed in the northern zone whereas Meruka is located in the north eastern division. Kasmira, Kira (Kangra), Daradas, Kulutas (Kulu), Kucikas (Kuca) etc. are all placed in the north eastern division whereas actually they ought to be placed in the north or the north western divisions.

Repetitions of the names in more than one list, is another discrepancy which may be pointed out, for instance, the Mandavyas are described in the north west as well as in the central zone; similarly we have Saulikas in the south east and Sulikas in the north west as well; Kulutas in the north west as well as north east etc. This may be due to the habitation of the same people in different regions or may be the bother cases.

Many ambiguous terms denoting the peoples and countries have also been inserted by Varahamihira viz., one-ffoted, three eyed; horse-faced; women-faced; high-necked; low-necked; fat-necked etc. the exact implication of which is very difficult to ascertain. Such fabulous terms seem to have been fabricated right from the times of Herodotus, and Greek and Latin writers.

SHAPE: The shape of India has been outlined differently by

different authorities.[1] In the Vendidad we have first reference to any part of India in a foreign literature and the Persepolis and Naksh-i-Rustam inscriptions of Darius I are the first datable epigraphical evidence in which the popular term Hi(n)du occurs.[2] Herodotus, the first historian of the world refers to the geographicalknowledge of India. He gives the description of the 20th satrapy of the empire of Darius I which he denotes by the term 'Hidu'.[3]

Megasthenese was the first to furnish us an idea of the shape of India, according to whom it was quadrilateral,[4] on the authority of which Eratosthenes and other writers have described India as a rhomboid, or unequal quadrilateral in shape, with the Indus on the west, the mountains on the north and the sea on the east and south. This information, it is further stated, was supplied by the Indians to the Alexander's informants, which shows that the Indians had fairly a good knowledge of the shape of their country.

In the Mahabharata the shape of India is described as an equilateral triangle, which was further divided into four smaller equal triangles. This shape is very near to the general form of the country, if we 'extend the limits of India to Ghazni on the north west and fix the other two points of the triangle at Cape Comorin, and Sadiya in Assam.'[6]

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1. CHI vol. 1, p. 324.
2. Ibid. p. 335.
3. CAGI p. 3.
4. Strabo ii.1.31; xv.1.11; Diodorus, History ii.3.
5. Bhisma Parva.
6. CAGI p. 6.

The description of India, however, in the Puranas is rather vague. The general conception of the country was : "The country that lies north of the ocean and south of the Himalayas"[1], It is said to be nine thousand leagues in extent, which, however, do not help us in drawing the exact map of India.

Unlike the contemporary Puranic description the Chinese travellers seem to have been influenced by the Vedic traditions of five fold difisions which they call 'Five Indies'[3]. Regarding the shape of India Hiuen Tsang compares the shape of the country to a half-moon, with the diameter or broad side to the north, and the narrow end to the south. But in another account India is described as narrow towards the south and broad towards the north, which[4], however, vague gives an accurate idea of the shape of India.

In the account of Varahamihira, the shape of India is identified with a tortoise, lying with its face to the east. The nine divisions of India refer to the nine different parts of its body. The description, though vague, but the exhaustive list as provided by Varahamihira can enable us to form an idea about the shape of India and insert the various place-names correctly. (Map appended).

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1. Visnu bk. ii ch.iii p. 127. cf Mark chs.57-59.
2. Ibid.
3. Watters i. p. 131. The shape is very much like that of Ptolemy.
4. CAGI p. 12.

SECTION II

CENTRAL DIVISION

Varahamihira furnishes us with as many as 33 ethnic names comprising the central division as follows: Bhadras, Arimedas, Mandavyas, Salvas, Nipas, Ujjhanas, Sankhyatas, Marus, Vatsas, Ghosas, Yamunas, Sarasvatas, Matsyas, Madhyamikas, Mathurakas, Upajyotisas, Dharmaranya, Surasenas, Gauragrivas, Uddehikas, Pandus, Gudas, Asvatthas, Pancalas, Saketas, Kankas, Kurus, Kalakotis, Kukuras, Pariyatra-naga, Audumbaras, Kapisthalas, Gajahvayas. Other texts such as Parasara Samhita records 32 names; Markandeya Purana,[1] 30; Matsya Purana,[2] 18; Brahmanda Purana,[3] 18; Vayu Purana,[4] 18; Brahma Purana,[5] 10; Vamana Purana,[6] 11; Garuda Purana,[7] seven; Kurma[8] and Visnu Purana,[9] two each; and the Natyasastra,[10] eight; in this division.

The list of Varahamihira conforming to accounts of the Parasara and the Markandeya Purana except that Parasara has Cakradan and Kuruksetra in his list and does not mention Sankhyatas, Marus, Vatsas and Ghosas; whereas the Markandeya Purana[11] includes the Sakas, Khasas and Vaidehakas but does not

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1. 58.6 ff; The second account of the Markandeya Purana (57.33 ff) enlists 10 ethnic names.
2. 114.34 ff.
3. 49.44 ff.
4. 107 ff.
5. 27.41 ff.
6. 13.36 ff.
7. 1.55.10 ff.
8. 1.47.41 ff.
9. 11.3.14 ff.
10. JASB 1909 p. 360.
11. 58.6 ff.

have the Yaunnas, Pandus and also Parasara's Cakradas and Kuruksetra. Certain names are incorrectly given in the account of Parasara, for example, Umaranya, instead of Dharmaranya; Lopa-Mandavya; Mandavyas/Uttamajyotisas,and Upajyotisas.

The Brahmanda and the Vayu Puranas, however, enlist a different set of names such as the Bodhas, Satapathesvaras, Kisastas or Kisasmas, Kulyas, Kuntalas, Kasis, Kosalas, Arthapas, Tailangas, Magadhas and Vrkas, from that of the Brhat Samhita. Similar account is found along with some other ethnic groups such as Vahyas, Sahapataccaras, Kiratas, Avantas, Kalingas, Mukas, and Andhakas in the Matsya Purana as well. The second account of the Markandeya Purana[1] enlists ten ethnic groups and includes names such as Asvakutas, Atharvas, Arkalingas and Malakas other than those mentioned by Varahamihira. The accounts of the Garuda, Kurma and Visnu Puranas are extremely meagre and are hardly of any importance and that of the Natya-sastra is defective. Three out of the seven names enlisted in the Garuda, the Sapataccaras, Kuntyayas and Kaucheyas and four out of eight names included in the Natyasastra viz., Kasmiras, Vahlikas, Sakalas, Madras and Kausalas do not find mention in the list of Varahamihira. These names belong to other regions as will be seen in relevant sections of this Chapter and cannot, for obvious reasons, be included in the central zone. Thus, though the Varahamihira's account of the division is similar in approach to that of Parasara and the Markandeya Purana, it differs from these accounts so far as it presents a correct and complete list to which he added some more names and left out others.

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1. 57.33 ff.

RIVERS:

Sarasvati: The Sarasvatas,[1] the people of the Sarasvata-ganah[2] as known to the Mahabharata, lived on the banks of the famous river Sarasvati[3] which lost itself in the sands near Sirsa. The Sarasvati river rises in the hills of Sirmur in the Himalayan range, and then flows through the plains of Ambala. A little above Pehowa, Sarasvati is joined by the Markanda and the united stream bearing still the name of Sarasvati ultimately joins the Ghaggar at a place called Ber.[4] This region is distinct from the Sarasvata mandala in Gujarat.

Yamuna:[5] The Yamunas lived in the portion of the Himalayan region, where the river Yamuna has its sources.[6] The Yamuna river takes its rise in the Himalayan range below Mount Kamet. The shrine of Yamunotri, eight miles from Kursoli, considered to be its source stands at the base of the Bandaipunch. It cuts a valley through the Sivalik range and Garhwal before it enters the plains. To the Chinese it was known as Yen-mok-na.

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1. BS xiv.2; xvi.22.
2. Mbh. v.57.23.
3. BS xvi.31; Mbh iii.82.111.
4. Punjab Gazetteer, Ambala District. p. 155. Some have identified it with Ghaggar itself (JRAS 1893, p.51), with the Helmond in Afghanistan (Ragozin, Vedic India) and with Arghandan in Archosia (Vedic Index ii p. 437) cf. CASR xiv. pp.87-90.
5. BS xiv.2; v.37; xvi.2; xliii.32; lxix.26. cf Rgveda x.75, v .52; Atharvaveda. iv.9,10; Aitereya Br. viii.14; Anguttara iv.101; Samyutta ii.135; v.401.460-61; Raghu vi.48; Kad p. 62.
6. BS xvi. ii; Mark pp. 377-78 cf Mbh xii.68.3; Bhagavata i.10.31.

MOUNTAINS:

Pariyatra:[1] The earliest epigraphical reference of the Pariyatra mountain is to be found in the Nasik cave inscription[2] of Vasisthiputra Pulumavi, where it is called Paricata. It is identified with the western portion of the Vindhya range west of Bhopal as also with Aravalli mountains[3] in Rajasthan. The name Pariyatra still survives in the Puthar range lying between the rivers Chambal and Banas.[4]

FORESTS:

Dharmaranya:[5] In the Padma[6] Purana, Agastya-asrama is considered to be the same as Dharmaranya which has been connected[7] with the Garhwal region. Another reading of the name of Umaranya or Umavana which is located in the district of the Kumaun.[8] Kanva-asrama near Kota in Rajputana was also called Dharmaranya.[9] According to Carlleyle,[10] Dharmaranya or the 'Vast Solitude', Fo-kwe-ki of Fahien, was situated close to Baliya somewhere between Patna and Benaras, 70 miles from the former and 84 miles from the latter.

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1. BS xiv.4. The variants are: Paripatra (BS v.68; lxviii.11); Pariyatrastha (BS vi.10); and Pariyatrika (BS x.15).
2. SI p. 196. cf CII iii. p. 157.
3. Mark p. 286 and note. cf A.R. vol. vii p. 338; Bhandarkar, History of the Deccan, sec. iii.
4. CASR vi. p.1; xiv. p. 151.
5. BS xiv.3.
6. Svarga vi. 5-7.
7. Dey p. 2. cf p. 56.
8. Ibid. p. 211.
9. MBH Vana ch. 82 cf Dey pp. 53-57.
10. CAGI pp 715-16 cf Ibid. pp.503-4.

CITIES:

Gajahvaya:[1] It is the same as Hastinapura,[2] meaning the appelation of the elephant i.e. Gajapura. Fleet[3] identifies it with Delhi which is obviously wrong. He seems to be confusing Hastinapura with Indraprastha. It was entirely washed away by the floods of the Ganges and the Kuru king Nicaksu shifted his capital to Kausambhi.[4] The ruins of this city now lies 22 miles north east of Meerut in Uttar Pradesh at Ma-wana.[5]

Kalakoti:[6] According to the Sabhaparva of the Mahabharata[7] Kalakuta was a kingdom which lay to the north of Kurukshetra in the terrain of the Himalayas from where one could reach the Sarayu and the Gandaka rivers. The territory, according to V.S. Agrawala[8], of Kalakuta extended between the Tonsa (Tamasa) and Yamuna (Dehradun, Kalsi) rivers. It seems that the Kalakuta-janapada of Panini times was reduced to a mere city during the times of Guptas. Varahamihira refers to it as a town, which may be identified with Muzzaffarnagar[9] in Uttar Pradesh.

Kapisthala:[10] Cunningham's identification of Kapisthala with Kapitha (Kia-pi-tha of Hiuan Tsang) i.e. Sankisa or Sankasya,

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1. BS xiv.4. cf Bhagwat 1.9;48; 15.38; 17.44; 111.1.17; ix.22.40; x.68.16.
2. Utpala pp. 285-86. cf Abhidhana p. 390; Trikandasesa p. 32;
3. IA xxii. p. 178.
4. Visnu pt. iv. ch. 21.
5. CAGI p. 702 cf PHAI pp. 5-6.
6. BS xiv.4.
7. Mbh. 26.3.4. In Asta, it occurs as Kalakuta (iv.1.173).
8. Panini p. 69.
9. BSAI p. 54.
10. CAGI p. 706 and pp 423 ff. cf EI vii. p. 157.

is untenable in the present context. It is obviously Kaithal[1] in the Karnal District. It is called Kavital by Alberuni.[2] The tribal entity of the Kapisthala people identified with the Kambistholoi of Arrian[3] seems to have been lost during our period.[4] In Panini's time Kapisthala also existed as a city.

Mathurai Varahamihira refers to the city of Mathura[5] which is modern Mathura in Uttar Pradesh and also the inhabitants of Mathura i.e., Mathurakas.[6] It was founded by the demon Madhu after whom it was known as Madhupuri, a variant of which is Madhura i.e., Mathura.[7] According to Buddha Prakash, the name of the city of Mathura, betrays a Sogdian influence that bespeaks the settlement of the Sogdians in middle India.[8] The Greek writers refer to Mathura as Methora or 'Modoura of the Gods'.[9] The Mathurakas are identified with the Surasenas.[10] According to the Harivamsa it was the capital of Surasena and was situated on the bank of the Yamuna.[11]

Sakatai[12] Saketa is modern Ayodhya. It is the same as Soked[13] of Tibetan and Chinese annals and Sageda of Ptolemy.[14] Saket

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1. Panini p. 86; Dey p. 92; MSAI p. 88.
2. AI 1. p. 206.
3. CAGI p. 247. cf Dey p. 92.
4. Asta viii.2.91.
5. BS iv. 26; xvi.17,21. Fleet's (IA xxii. p.135) identification of Mathura with Muttra in the North West Frontier Provinces is not correct.
6. Ibid. xiv. 3.
7. SIHC p. 2. cf JRASB 1946.
8. MM p. 129.
9. Mathura ya Surasena, in Jaina Upanga, IA xx. 375.
10. HV ii. 34.22.
11. Ibid. 1.54.21. See vv. 56-62. cf TAI pp. 40-45; Dey pp.127-28.
12. BS xiv. 4.
13. KI xiv. p. 142; IA 1903 p. 382.
14. Dey p. 174.

was one of the six great cities of India in the time of Buddha.
Saketa is sometimes confused with Ayodhya.[1] According to Hema
Chandra,[2] Saketa, Ayodhya, and Kosala were synonymous terms.
Saketa has been mentioned by Patanjali as being besieged by the
Yavanas.[3] According to the Mahavagga,[4] Saketa was six leagues
from Sravasti.

COUNTRIES AND TRIBES:

Arimedas:[5] The Amarakosa refers to Arimeda as a tree of
Vitkhadira.[6] An inscription of the reign of Kakatiya Ganapatideva[7]
mentions a king of Arimarda in northern India. Arimarda and
Arimeda bear the same meaning. The word Medha of the name Arimedha
or Arimarda survives in Medapata by which the famous Rajput State
of Mewar or Udaipur was known.[8] The Mers of modern times,[9] who
still inhabit the Aravalli hills on the boundary of Mewar are
the descendents of the Arimedas whose capital has been identified
with Merta[10] to the West of Ajmer in Jodhpur.

Andambaras:[11] The Andambaras[12] lived in the Gurdaspur-Pathankot
region.[12] In the Mahabharata they are located in the Madhyadesa
The coins of the Andambaras issued in the first century B.C.
have been mostly found in the Pathankot and the Jawalamukhi
regions and the Hoshiarpur district.

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1. "Saketa is often supposed to be the same as Ayodhya but both cities are mentioned as existing in the Buddha's time. They were possibly adjoining like London and Westminster." BI p. 30.
2. Abhidana p. 280. cf DKA p. 53. 3. Bhasya iii.2.iii.
4. SBE vol. xvii. 5. BS xiv.2. 6. Amara p. 145.
7. Hyderabad Archaeological Series no. 4; EI xxiv.307.
8. MBAI pp. 26-27.
9. IA vi.191. The Medas are also found on the coast of Baluchistan. IGI vi. 268. cf IA vii. 254.
10. EI xiii. 94. cf Elliot and Dowson, History of India, i.pp.519-30.
11. BS xiv.4. 12. Sabha ii. 1869.
13. Allan Catalogue lxxxii.

From the evidence of their coins, Przyluski infers that they possibly followed Buddhism.[1] But on some square copper coins there is a representation of Saiva temple characterised by dhvaja, a trident, and a battle-axe,[2] which shows that they were Saiva worshippers.[3] According to Patanjali, a river called Udumbaravati flowed through their territory.

Bhadras:[4] Kern explains the term Bhadra by the 'Blessed' and suggests that the Bhadras are the same as Bhadrasvas. The Mahabharata mentions the Bhadras[5] and the Bhadrakaras[6] who are undoubtedly the same people. Varahamihira describes the Bhadras living in different parts of India[7] in eastern as well as in southern divisions.[8] There were also Prabhadras, presumably a Punjab tribe and Uttamabhadras of the Malwa region.[9] According to the Padma Purana,[10] Bhadravati city was situated on the banks of the Saraswati and which was said to be 20 yojanas distant from Hastinapura.[11] This Bhadravati may be identified with Bhatinda (the city of Bhattas or Bhadras) in the Punjab which lies very near to the Saraswati.

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1. JA 1926 pp. 1 ff.
2. JNSI iv. pp. 55 ff. cf IHQ xx. pp.59 ff; MMNI p.43.
3. iv.4.2.71 cf Cullavagga pt. xii chs 1 and 2; ASR xiv.pp.115,135.
4. BS xiv.2,7,16.
5. Vana ccliii.15256.
6. Sabha xlii. 590 cf Mat 114.35; Mbh iii.253.19.20.
7. BS xiv.7,16. cf KT iv. pp.245,248.
8. MBH vii. 22.43 and v.67.33.
9. PHAI p. 409.
10. Uttara ch. 30.
11. Jaimini Bharata ch. 6.

Gaurakrivas[1] In the Medinikosa the word 'Gaura' is explained as a characteristic of Apaga. If we take the latter as the name of the river, it shall have to be identified with modern (nala) Nik which flows through the district of Sailkot. Hence the people living on the banks of this river may be identified with the Gauragrivas.

Ghosas:[2] The Ghosas may be identified with the cowherds. The Harivamsa[3] refers to the colony of cowherds at Brindavana near Mathura, which might have developed into a flourishing Janapada of the Ghosas. The region of the Ghosas may, therefore, be identified with the famous pastoral district[4] on the Yamuna near Mathura.

Gudas:[5] The Gudas are the inhabitants of modern Gurgaon. It seems that there was more than one Gudas.[6] Varahamihira seems to have been aware of atleast two different Gaudas - Gaudaka in the eastern division and Guda in the middle country, which must not be confused with each other. The modern Gurgaon in the neighbourhood of Delhi is possibly the territory of the ancient Gudas(of the middle country) which is corroborated by the order of narration, according to which the people of Guda have to be located somewhere in the neighbourhood of the Pandya (Pandu) country[7] (i.e. Delhi). It is further testified with the existing Gaur group of Brahmanas of the Haryana.

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1. BS xiv. 3.
2. Ibid. 2. They had another settlement in the north east division also (Ibid. xiv.30).
3. ii. chs. 7-9.
4. Dowson, Classical Dictionary, p. 115.
5. BS xiv.3.
6. Gurjara Pratiharas p. 34 fn.2. cf Linga i. p.65; Kurma i.20, 19; TAI pp. 273-74; JRAS 1906 p. 242; CAGI p. 408; Dey p. 63; PHAI p. 837.
7. Utpala p. 186 Pandugudas.

Kankas[1]: Kang Jat. The Kankas are grouped with the Sakas,[2] Tusaras and a host of other foreign people in the Mahabharata as bringing presents to the Pandavas. They were a Central Asian tribe migrated into India from Gada-Ghazani. Their Chinese nomenclature is Kang-kiu.[3] The modern Kang Jats of the Punjab belong to the same people.

Kukuras[4]: North Kathiawad. The Kukuras or the Kiu-chi-lo[5] of Hiuan Tsang were an extraordinarily powerful people.[6] The Mahabharata refers to the name Kukura as a vamsa as well as a country.[7] The epigraphs of Rudradaman and Gautamiputra Satkarni mention the Kukura country along with Aparanta.[8] Their Capital was Balmer, the Pi-lo-mi-lo of Hiuan Tsang.[9] But Varahamihira refers to it in the middle country.

Kuru[10]: Meerut.[11] Kauravas,[12] Kuruksetra,[13] Kuru-jangala,[14] Kuru-bhumi,[15] and Uttara Kuru are the other supplementary terms used by Varahamihira to denote the above mentioned country. The Kuru-bhumi was divided into three parts, viz., the Kuru proper occupied the area between the Ganga and the Yamuna with Hastinapura as their capital, Kuruksetra with its centre at Thanesvar

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1. BS xiv.4.
2. Mbh. ii. 49.25.
3. SIHC ch. on the Kidarites of ESAI p. 53.
4. BS xiv.4.
5. HV 1.37.33.
6. ii. 48.16; iii.154.32; v.28.11.
7. Bhisma vi.51.7. cf AIHT pp. 104-5; HV 1.37.16 ff.
8. EI viii.44,61.
9. Dey, p. 108. cf SI p. 172 fn.1; ESAI pp. 55-57; Yazdani Deccan vol. 1.
10. BS xiv. 4.
11. Ibid. iv.24,25; ix.30.
12. Ibid. v.78.
13. Ibid. ix.29.
14. Ibid. xvi.32.
15. Ibid. xiv.24 (in the northern country).

lay between the Saraswati on the north and Drisadvati on the south,[1] while Kurujangala probably denotes the area between the Saraswati and the Yamuna (between the Kamyaka forest and Khandava).[2] The Kurus in question occupied the area around Meerut between the Ganga and Yamuna. The king of Kuruksetra (Kuruksetra-adhipa)[3] is also mentioned by Varahamihira.

Madhyamikas:[4] The Madhyamikas should not be confused with the residents of Madhyadesa. They were a tribal people living in Rajasthan near Chitor. Patanjali refers to the Yavana invasion of Madhyamika.[5] A number of coins unearthed at Nagari, seven miles north of Chitor, with the legend "Majhamikaya-Sibi-Janapadasa", belonging to the second century B.C. give definite indication of the identity of Madhyamika with modern Nagari. Another corresponding term is Manjja territory of the Punjab.

Mandavyas:[6] A Pra-tihara inscription[7] states that the Gurjaras constructed a large rampart round the fort of Mandavyapura which was gained by their own prowess. Mandavyapura, evidently the chief town of the Mandavyas, is identical with modern Mandor, a ruined town, about five miles to the north of Jodhpur city.

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1. Mbh Vana lxxxiii.204.5. Manu (ii.17) calls it by the name of Brahmavarta and speaks of it as the holiest land inhabited by Aryans.
2. Ibid. iii.83.4; Adi. ccxxi.14; Vana v.3.
3. BS xiv.2.
4. Ibid.
5. Allan cat. p. cxxiv-v; CL p. 173.
6. BS xiv.2.
7. EI xviii.91; JRAS 1894 p.3; IGI xvii. p. 171.

Marmi[1] Other variants[2] are Marusthali, Marubhumi and Marudhanva. According to Fleet[3], it is the modern Marwad, but it connotes a much wider region. The Maru country has been described as lying to the north west of the Gujarat region and to the north of Dvarka and also as famous for its camels[4]. It is obviously the great Indian desert called the Thar or Rajputana desert and also included the Marwad region[5]. Marohoe of Pliny may refer to the people of Maru.

Matsyai[6] The Matsya country comprised Alwar, Jaipur and Bharatpur[7]. Matsyadhipati, the lord of the Matsyas is referred to by Varahamihira[8] also. The Matsya-rajya[9] or Virata-rajya[10] of the Mahabharata had its capital at Virata-nagara, identified with the modern town of Bairat, 42 miles north by north east of Jaipur city in Rajasthan[11]. The Po-li of Hiuan Tsang is usually regarded as identical with Matsya.

Nipas:[12] In the Raghuvamsa a Nipa King[13] is described as the Lord of Surasena[14]. The Mahabharata is not very conclusive

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1. BS xiv.2; v.68; xvi.38. Utpala p. 226 translates as Marubhuh.
2. Day p. 127.
3. IA xxii. 184.
4. Saktisangama. bk.iii ch.vii, v-19. CAMI p. 91.
5. McC Mag pp. 146-47.
6. BS xiv.2; v.37,38; ix.18; xvi.22; xvii.22; xxxi.11.
7. CL p. 53.
8. BS iv.24
9. iv.6.12.
10. CL p. 53.
11. Watters i.p.300. cf ESAI p. 32.
12. BS xiv.2.
13. vi. 45-46.
14. ii. 8.22; v.69.13; Sabha 51.24.

regarding their situation. Pargiter[1] points out that a Paurava king called Nipa had his capital in Kampilya, modern Kampil in the Farrukhabad District. It is likely that a branch of the Pancala rulers established itself in Surasena, i.e., the Mathura region.

Pancala:[2] It stretches from the foot of the Himalayas to the river Chambal and Ganga dividing it into north and south Pancala with their capitals at Ahichhatra and Kampilya respectively.[3] North-Pancala was further divided into Purva and Apara Pancala, the demarcation line being the Ramaganga river. South Pancala comprises the districts of Etah and Farrukhabad.

Pandus:[4] The Pandus ruled at Indraprastha (Modern Delhi) in the time of the Great Epic. Ptolemy refers to the country of Pandoouoi comprising the Bidaspes (Jhelum).[5] The Greek writers knew also of a Pandava settlement on the basin of the river Chambal. But the Pandyan kingdom of the age of the Periplus, and Pandion of Strabo and Ptolemy,[6] refer to the famous Tamil country on the eastern sea coast of south India. The Pandus of the Brhatsamhita seem to be quite distinct from the heroes of the Mahabharata, Varahamihira is obviously referring

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1. Mark p. 350 fn. cf. RV 1.21.41; 20.44-45; Dey p. 8.
2. BS xiv.3,32; iv.22; v.35,38,41; ix.29,34; x.4.13.
3. Panini p. 58. cf MBh vii. 138.3; 144.103; Ait Br viii.14; Vedic Index i.165 fn.1.
4. BS xiv.3.
5. McC Ptol. pp. 121, 128.
6. McC Meg pp. 150-51 fn. cf. AI i.p.199; IGI p. 298.

to some contemporary people. Most probably the Panduvamsis of southern Kosala, who are known to us from a large number of copper plate grants, are intended.

Salva,[1] Salva:[2] The area extending from Alwar to North Bikaner[3] denotes the Salva territory. The other variants are the Salveyas[4] and the Salvavayava,[5] obviously the branches of the Salvas. The Salvas are spoken of as dwelling on the banks of the Yamuna.[6] Cunningham[7] locates them in the territory between the Saraswati and the Jumna, adjacent to the Matsyas. It is suggested[8] that the modern Alwar city derived its names from Salvapura. But according to Pargiter[9] the Salva country was on the western side of the Aravalli Hills; their city Marttikavata having been situated on the north eastern limits of the modern Gujarat, which is wrong in the light of Varahamihira's reference[10] who groups Marttikavata with Taksasila and Gandhara.

Sankhyatas:[11] Pargiter[12] refers to the Sankratas or Sankrtyas, a sub-branch of the Bharata tribe, connected with the river Carmanvati (Chambal). Their king Rantideva Sanskrti,[13] a Paurava had his capital at Dasapura (modern Mandsor) which lay on the river Chambal.

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1. BS xiv.2; v.76.
2. Ibid. xvi. 21; xvii.13,18.
3. Panini pp. 70-72.
4. Asta iv. ii.135; iv.i.173.
5. Ibid. iv.i.169.
6. Vedic Index ii. 187 cf. JA 1929, pp. 311-54 (p. 314).
7. ASI xx.120.
8. Ibid.
9. Mark pp. 342, 349 fns.
10. BS xvi. 36.
11. BS xiv.2.
12. Ibid. AIHT p.7.
13. Ibid. p. 274.

Surasenas[1] The Greek writers refer to the Surasenas as Sourasenoi and their city as Methora (Mathura). Manu[2] describes them as an ideal people, the best representatives of Brahmanical culture while Vatsyayana[3] seems to draw the conclusion that they had lost the ancient purity in their manners and customs.

Varahamihira[4] refers to the king of the Surasena country also.

Uddehikas:[5] Bayana in Bharatpur. Coins bearing the inscription Udehaki in Brahmi character of the second century B.C. found at Rairh,[6] can be attributed to the Uddehikas.

Ujjihanas:[7] On the authority of the Ramayana[8] where a place called Ujjihana is mentioned, it is suggested that Ujhani, a town in the district of Budaun in Uttar Pradesh lying 8 miles west of the town of that name, represents the ancient name Ujjihana.[9] Dey, however, prefers to identify with Ujjayini.

Uttarajyotisas:[10] Parasara[11] gives another form viz., Uttama or Uttara-jyotisas whose city was Divyakatapura according to the Epic.[12]

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1. BS xiv.2; v.35,69; ix.17; xvii.13,22; lxix.26; xi.54. cf HV ii.34.22.
2. ii.19. cf Buehler, Laws of Manu, pp. 82-83.
3. Kama p. 411 (Calcutta).
4. BS ix.11.
5. Ibid., xiv.3.
6. CCAI p. cxli. cf AI pp. 200 ff.; ESAI p.48.
7. BS xiv.2.
8. ii.71.12.
9. ESAI p. 30.
10. BS xiv.3. cf Mark ch.58. 6 ff.
11. Utpala xiv,3.
12. Mbh. ii. 32.11.

Varahamihira's Upajyotisas, no doubt, were identical with the Uttarajyotisas. Prag-jyotisas, the famous eastern people of Assam and the Upajyotisas or the Uttara-jyotisas may be western branch of the Jyotisas. The name of the Jyotisas can be found in the Zutshis (Brahmans of Kashmir). A place name Jyotirmatha (modern Jyotishamatha) near Badrinath, the famous place of pilgrimage may be identified with the Upajyotisas territory.

Vatsa:[1] Puranic tradition records that Vatsa obtained its name from a Kasi prince called Vatsa, who annexed the country round Kausambi and called it Vatsa.[2] The Vatsa country included the whole of the triangular wedge of land enclosed by the converging channels of the Ganges and the Jumna. Its capital was Kausambi, identified with the village Kosam on the left bank of the Yamuna, about 30 miles to the south west of Allahabad.[3]

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1. BS xiv.2; x.5; xvii.18,22. It is also mentioned in the south east division (xiv.8.).

2. AIHT pp. 269-70. cf Mbh iii.253.10; DKDI p. 225.

3. JRAS 1929 pp. 689 ff. cf MASI no 60.

SECTION III

EASTERN DIVISION

The Brhat Samhita enlists as many as 33 settlements in the eastern sector;[1] Parasara, 37;[2] Markandeya, in one account 29[3] and in another 19;[4] Brahmanda[5] and Vayu,[6] 18 each; Matsya,[7] 17; Brahma,[8] 19; Vamana,[9] 20; Garuda, 7;[10] Natya-sastra, 21; and Kavyamimamsa, 16. Varahamihira records the following settlements in this division: Anjanagiri, Vrsabhadhvajagiri, Padmagiri, Malyavatgiri, Vyaghramukhas, Suhmas, Karvatas, Candrapuras, Surpakarnas, Khasas, Magadha, Sibiragiri, Mithila, Samatata, Udras, Asvavadanas, Dantirakas, Pragjyotisas, Lauhityas, Ksirodasamudra, Purusadas, Udayagiri, Bhadras, Gaudakas,[10a] Paundras, Utkala, Kasis, Mekalas, Ambasthas, Ekapadas, Tamaliptikas, Kosalakas and Vardhamana.

While the account of Parasara does not mention the Candrapuras, Surpakarnas, Khasas and Magadha of the list of Varahamihira as also of Markandeya Purana,[11] it

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1. 58.11 ff.
2. 57.51 ff.
3. 49.56 ff.
4. 45.122 ff.
5. 114.37 ff.
6. 27.51 ff.
7. 13.44 ff.
8. i.55.11 ff.
9. xiv.46-47; JASB 1909, p. 360.
10. No. i, p. 94.
11. 58.11 ff.

10a. Surpakarnas and Ekapadas are fabulous and ambiguous terms.

includes the names of Dravida, Karnikosta, Adhisrotra, Minasana, Kirata, Samvira, Mahidhara and Vivasana, other than those listed by Varahamihira which, however, remain incorroborated and further gives the variants such as Vajimukha, Lauhityarnava, Ksirodarnava, and Pundra, of Asvavadanas, Lauhityas, Ksirodasamudra, and Paundras respectively.[1] Whereas the Markandeya Purana does not mention the names of Padmagiri, Suhmas, Samatata, Udras, Paundras and Utkala contained in the texts of both Brhat Samhita as well as Parasara Samhita, it includes Jambvakhya, Kharnaka and Purnatkota, not cited by Varahamihira.

The list of other Puranas are very different from the one supplied by Varahamihira. Only five names of the list of the Brhat Samhita occur in these texts. Out of total of 18 names, the Vayu and the Brahmanda give 13 names, such as the Andhravakas, Sujarakas, Antargiriyas, Bahirgiriyas, Pravangas, Vangeyas, Maladas, Malavarttinas, Brahmottaras, Pravijayas, Jnaya-marthakas, Malas and Gonardas which are repeated in sources other than the Brhat Samhita with little variation.

The list of Brhat Samhita seems to be complete and correct and is corroborated by the lists of Parasara and the Markandeya Purana[2] taken together.

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1. 58.11 ff.
2. Ibid.

RIVERS

Lauhitya[1]: Brahmaputra. Issuing from the eastern region of the Manasarovara, it flows through Tibet and enters India in the north eastern frontier district of Sadiya. In Tibet it is known by the name of T'sangpo.

OCEANS

Ksirodasamudra[2]: Bay of Bengal.

MOUNTAINS

Anjana[3]: According to the Jatakas[4] it was situated in the Mahavana. Mahavana is mentioned in an old inscription which is identified with the present Jeypore forest region in Orissa.[5] It is difficult to accept the theory that Varahamihira refers to the mountains of the western range in the list of eastern sector.[6]

Malyavati[7] It corresponds to the Mount Maleus of Pliny[8] situated somewhere between the Calingae and the Ganges which has been identified with Mount Mandar, situated in the south of Bhagalpur[9] or with Mallaparvata in eastern India.

Maikala: It is the eastern range of the Vindhya mountains, i.e., the Maikal Range in Gondwana in Madhya Pradesh.[11] The river

1. BS xiv.6; xvi.16. cf GI pp. 148,206; Raghu iv.81; Mbh Bhisma ch.9; Hedin, S., Trans-Himalaya, vol.ii ch.43.
2. Ibid. xiv.6.
3. Ibid. 5. cf Kis 37.5; Mark 58; Asta vi.3.117.
4. v. 133.
5. JAHRS i p. 228.
6. EGAI p. 158. cf HGAI p.65; IHQ xxix.5-7; Panini p. 45.
7. BS xiv.5.
8. Natural History vi c.21.
9. CAGI p. 582.
10. BS xiv.7; v.39,73; xvi.2. 11. HGAI p. 20.

Narbada is called[1] the Mekalasuta and Mekala Kanyaka in the Amarakosa. The Amarkantaka is its eastern peak which is a source of three rivers, viz., Narbada, Sona and Mahanadi.

Padma:[2] Konaraka was called[3] Padmaksetra. Can we infer that the Padma mountain was a small hillock near the same place?

Udayagiri:[4] It refers to the northern peak of the famous Khandagiri hills of Bhuvaneswar.[5] The caves on the Udayagiri hill range from 500 B.C. to 500 A.D.

Vrsabhadhvaja:[6] It may be identified with the Vrsabha Parvata in the Rajgir hills in Bihar.[7] Vrsabhasrnga was one of the hills of Girivraja.

CITIES

Candrapura:[8] Varahamihira refers to Chandrapura[9] which denotes the residents of the city of the same name Candrapura has been identified differently. Some identify it with modern Chandpur, 6 six miles to the east of Deoghad lying to the south of Siwani and to the west of the Ken Ganga river, which is full of Jaina and Brahmanical ruins.[10] Another identification is with Candradvipa mentioned in the Rampal grant of Sricandra,[11] which corresponds to some portions of Backerganj in particular and some portions of the modern districts of Khulna and Faridpur.[12] Dey, however, identifies it with Canda in the Central provinces.[13]

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1. Padma ch.6.
2. BS xiv.5.
3. Dey, p. 143.
4. BS xiv.6.
5. JASB vol xxxix; AR vol xv.
6. BS xiv.5.
7. Mbh ii. 21.2.
8. BS xiv.5.
9. CII iii p. 68; GI p. 71.
10. EI iii p. 260; AR x. 96.
11. Inscriptions of Bengal, vol iii pp. 2 ff.
12. EI xii. 141; HGAI p. 245; IHQ iv. 638.
13. Dey p. 47.

Chayenpur, five miles to the west of Bhabua in the district of Shahabad in Bihar, can be another possibility.

Kasi[1]: It is the modern Benaras, the famous sacred city on the Ganges.[2] Varahamihira mentions Kasi as a city, as well as a country.[3] The king of Kasi[4] is also referred to. Kasi was one of the sixteen Mahajanapadas[5] during the Buddha time. In the 7th century A.D. the kingdom of Kasi, Po-lo-ni-se i.e., Varanasi was 4000 li or 667 miles in circuit with its capital, which was on the western bank of the Ganges.[6]

Tamralipti[7]: Tamralipti is the modern Tamluk in the Midnapore district of West Bengal, situated on the Rupnarayan river, 12 miles above its junction with the Hughli (22° 18' N and 87° 56' E).[8] It was the capital of the Suhma kingdom in the 6th century A.D. Dandin[9] mentions a temple of Bindubasini at Tamralipti. It was a great maritime port and an emporium of commerce from the 4th to the 12th century A.D.[10] It was a place of embarkation for travellers visiting south Asian Islands and China. It was called Tamalites by Ptolemy and Taluctoe by Pliny.[11] In 1940, excavations were carried out at the ancient site of Tamluk by the archaeological

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1. BS xiv.7; v.69,72; x.4,13; ix.19; xi.59; xvii.25; xxxi.19; lxxviii.1. Cf Asta iv.2.116; Bhasya ii.1.1.; Bhagawata ix.22, 23; x.32.57; xii.13,17; Skanda ch i.19-23; Sata Br xiii.5,4,19; Rama Uttara 56,25; Kis Sarga 40; Adi Sarga 13; HV ch.31.
2. Ibid. xiv.7; v.72; x.4,13; xxxi.19.
3. Ibid. xvii.25.
4. Ibid. ix. 19, xi.59; lxxviii.1.
5. Anguttara i,213; iv.252,256,260.
6. Watters ii.46; Beal ii.44 ff. cf HGAI pp. 94 ff.
7. BS xiv.7.
8. Dey p. 203.
9. DKC ch. 96.
10. KSS xii. ch. 14.
11. CAGI p. 732.

department of India.

Vardhamana[1]: Vardhamana is the modern Burdwan. Vardhamana[2] is a name of considerable antiquity. In the Pala and Sena periods it figured as a name of a famous Bhukti and by the 12th century the Vardhamana Bhukti[3] comprehended the entire region to the west of the Bhagirathi. Various cities of this name[4] seem to have existed.

COUNTRIES AND TRIBES

Ambasthas[5]: Kern[6] remarks that the Ambasthas of the eastern division are the Ambastas of Ptolemy. Even to-day in Eastern India, a class of Kayasthas are known as Ambastha Kayasthas in Bihar[7] while the Vaidyas of Bengal claim to be designated as Ambasthas.

Asva-Yadamas[8]: They may be identified with O-Ye-Mu-Khi(A-Ye-Mu-Ka)[9] i.e., Hayamukha of H. T'sang[10] which are located by Cunningham[11] in Daundiakhera on the northern bank of the Ganges in the district of Baiswara about 104 miles north-west of Allahabad in Oudh.

Bhadras[12]: See under Central zone.

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1. BS xiv.7; xvi.3; lxxix.21; xciv.2. 2. IHQ viii.531-32.
3. The History of Bengal vol i pp. 26-28.
4. Historical Aspects of the Inscriptions of Bengal p.60 fn.4.
5. BS xiv.7; xiv.17(in the south west); xi.19; xvi.22. cf. Asta viii.2.97; Bhasya iv.1.171.
6. IA xxii. 173. 7. TAI p. 97.
8. BS xiv.6. Asva-mukha xvi.35; Durgasana xiv.26(in the northern division). 9. Julien ii. 274.
10. Watters i.339. "In climate and natural products the country resembled Ayudhya: the character of the people was good, they were studious and given to good works". Ibid.
11. CAGI pp. 443-44. But Rhys Davids opines that the river mentioned by Cunningham is not the Ganges but instead is the Sai. Watters, i p. 360. But Beal considers that the identification is not satisfactory. Ibid.
12. BS xiv.7.

Dantapurakas[1] The Danturakas probably were the residents of Dantapura[2], capital of Kalinga where the 'tooth-relic' of the Buddha was enshrined immediately after his death by the reigning king Brahmadatta. It corresponds to Danda-guda or Dandagula of Pliny[3], and Dantakura of the Great Epic[4]. It is mentioned in the Jirjingi plates of Ganga Indra-Varman[5] as a beautiful city, more beautiful than Amaravati, the city of the gods. Some identify it with Raja-Mahendri[6] on the Godavari and other with Dantan in the Midnapore district[7]. Dey,however, identifies it with Puri in Orissa[8]. During the time of H.T'sang the capital of Kalinga (Ka-leng-ka) however, was Kalinganagara, identified with modern Mukhalingam[9], in Ganjam district.

Gaudakas[10] It comprised the present Murshidabad district and the southern most-area of the Maldah district in Bengal[11]. H.C. Ray Chaudhuri[12] suggests that their 'proper realm' was western Bengal which was bordered on the sea and included Karnasuvarna and Radhapuri. The ruins of their capital Gauda, situated at the junction of the Ganges and the Mahanandi, are found near Maldah in North Bengal (W. Bengal) at a distance of 10 miles south west of the town[13]. Cunningham, however, identifies it with Gonda, a sub-division of Uttara Kosala, 42 miles south of Sravasti, which is obviously wrong.

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1. BS xiv.6.
2. Digha ii p. 235.
3. Natural History vi. 23. cf CASI p. 592.
4. Udyoga xlvii. 1883.
5. EI xxv pt. vi April 1940 p. 285.
6. CAGI p. 592. cf HGAI p. 149.
7. Dey p. 53.
8. Watters ii. 198 ff.
9. EI iv. 187; CAGI p. 735.
10. BS xiv.7. Kern gives 'Gauras' i.e., the Whites, supposed to have lived in Svetadvipa, near the cocoa-islands. It is also referred to as Gaudapura in the Asta (vi.2.99-100) cf.Kama ii. 13; Arth ii.13; HT vol i , p.90; Mat xli.30; Linga i.65; Kurma i.20.19; Vayu 88.27; Brahma vii.53; Padma 139.2 and Mbh. iii. 201-4.

(continued next page).

Karvatas:[1] The Karvatas are the modern Kharwars[2] of West Bengal.

Kausalakas:[3] The Kausalakas were the inhabitants of modern Oudh. It was under king Dilipa II and his immediate descendants that the country acquired the name of Kosala.[4] Kosala came to the lime light in the Buddhist time when it was one of the sixteen Mahajanapadas[5] of India. The boundary of the kingdom of Kosala in the Buddhist times corresponded roughly to the modern Oudh[6] and lay to the north east of the Gangas.[7] The Kosalans' importance is very well preserved in the Epic Ramayana wherein it was considered to be the torch bearer[8] of Aryan civilisation to the south as far as Ceylon. Ayodhya, Sravasti and Saketa were the capital cities of Kosala.

The division of Kosala into north and south Kosala came to be recognised in the Vayu Purana with their capitals at

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11. CAMI p. 113. See also Sirdar D.C. 'Gauda', IHQ vol.28, pp. 123-34, 1952.
12. PHAI 6th ed pp. 632 ff.
13. HCAI pp. 217-18; TAI pp. 270 ff.; Dey p. 68.
14. CAGI p. 408.

1. BS xiv.5, xvi.13.
2. History of Bengal vol 1, p. 9 fn 1. cf IHQ viii.529-30.
3. BS xiv.7. Kosala xiv.8 (in the south east division), x.14; v.70; x.9.
4. AIHT p. 275. Kosala is not mentioned in the earliest Vedic Literature. Kosala as a country is referred to in the later Vedic works like the Sata Br. 1.4.11 and the Kalpasutras and Gopatha Br. (Vedic Index 1. 195). Panini also mentions it vi.1.7.
5. Anguttara Nikaya vol. i p. 213; iv. pp. 252,256,260.
6. PHAI 6th ed. pp 77 ff.
7. Vedic Index vol. i p. 190.
8. AIHT p. 276.

Sravasti[1] and Kusasthali respectively. In the 7th century when Hiuan Tsang[2] visited north Kosala to which he names Shili-lo-fa-si-ti i.e., Sravasti, it was 6000 li in circuit, identified with Sahet-Mahet.[3] Northern Kosala denotes the modern Oudh region.[4] The kingdom of Kia-sa-lo or Kosala of Hiuan Tsang, denoting southern Kosala,[5] should correspond to the districts of Raipur, Sambalpur and Bilaspur.[6] Varahamihira was aware of the fact of the two Kosala countries - one he locates in the eastern sector alongwith Kasi and Magadha and the other in the south eastern horizon alongwith Kalinga and Vidarbha. It is said to be celebrated for diamond-mining.[7]

Khasas[8] The Markandeya Purana[9] places the Khasas in the eastern region alongwith the Pragjyotisas, Mallas, Videhas, Magadhas, Lauhityas and Bhargvas. Their identification, however with the Khakkas in Kashmir[10] does not seem to tally with the account of Varahamihira.

Kosalas[11] See under the Kausalakas.

Magadha: Magadhikas[12] Magadhikas are the people of Magadha[13] country. It is modern south Bihar, lying to the south of the river Ganges. Ancient Magadha embraced the country bounded on the north by the river Ganges, on the west by the river Son, on the

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1. ch. 88.196.
2. Watters, i, pp. 177-401.
3. ASI i. p. 330; xi. p. 78.
4. CAGI p. 463.
5. Watters ii. pp. 200 ff.
6. CAGI p. 896 cf JRAS 1875 p. 260; PHAI 6th ed. p. 538. cf.EHNI p. 152; SI p. 429.
7. BS lxxiv.6.
8. Ibid. xiv.6; x.12; lxix.26.
9. pp. 327-30, 357.
10. Ancient Geography of Kashmir p. 430 cf Dey, p. 99.
11. BS xiv.8.
12. Ibid.6; iv.22,26;v.69,70;x.14;xi.55;xvi.1;xxxii.11.
13. Ibid. xiv.32.

east by Anga and on the south by a dense forest.[1] The name of the famous capital of Magadha Pataliputra occurs in the annals of classical writers as Palibothra, is the modern Patna. The earlier capital of Magadha was Girivraja or Rajagrha. Hiuan Tsang visited it during his travels in India. Varahamihira refers to Magadhadhipa i.e., ruler of Magadha also.

Mithilas:[2] People of Mithila, which is identified with Tirhut, Janakapur. It was the famous capital of the ancient kingdom of Videha. According to the Satapatha Brahmana Videha was separated from Kosala by the river Sadanira. Videha was extended from the river Gandak to the river Kausiki and from the Ganges to the Himalayas.[3]

Pragjyotisa:[4] Pragjyotisa which is used in the context of Kamarupa by Varahamihira[5] is the modern Assam province.[6] Hiuan Tsang designates this kingdom as Kamarupa or ka-mo-lu-p'o which was 10,000 li, or 1667 miles in circuit. This large extent shows that it must have comprised the whole valley of the Brahmaputra river, or modern Assam. It may have included even Bhutan.[7] But according to some Kamarupa of Hiuan Tsang represented only western Assam.[8]

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1. CHI i.p. 182 cf PHAI p.95; TAI pp.93 and 112 ff; Vedic Index ii.116-18; ABORI viii. pp 159 ff.
2. BS xiv.6, x.14.
3. TAI p. 230. cf IA xx.375; Mbh iii.206.6 ff; AIHT pp.95-96.
4. BS xiv.6; xvi.1.
5. The Abhidhana p. 381 supports such a contention. cf. Raghu iv. 81-84. See also JRAS 1900 p. 25.
6. Watters ii. 185 ff.
7. CAGI p. 573.
8. Watters ii. 186. According to Cunningham, the valley of Brahmaputra was anciently divided into three tracts viz., Eastern, Middle and Western districts, as Sudiya, Assam proper and Kamrup respectively. As the last was the most powerful state, and also the nearest to the rest of India, its name came into general use to denote the whole valley.

Its capital was Guhati on the bank of the Brahmaputra which was known as Pragjyotisapura.[1] There appears to be another Pragjyotisapura on the bank of the river Betwa or Vetravati.[2]

Paundra:[3] Pundra:[4] Paundra and Pundra are identical with Gauda and their territory was extended around Malda. The Pundras were known as outcasted descendants of Visvamitra.[5] In the Mahabharata they are linked with the Vangas and Kiratas and elsewhere with the Udras, Utkalas, Mekalas, Kalingas and Andhras.[6] Hiuan Tsang's Pun-na-fa-tan-na[7] has been restored as Pundravardhana,[8] identified with Pandua in the district of Malda in Bengal. It is six miles north of Malda and 22 miles north east of Gauda.[9] Pundradhipati mentioned by Varahamihira[10] may be one of its earlier rulers who came into power after the fall of the Guptas. It was a source of black diamonds according to the astronomer.[11]

Purusadasi:[12] Cannibals:[13] The Mahabharata designates the Nisadas as Purusada. The Nisadas were an Austro-Asiatic tribe of rude

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1. CAGI p. 574. Cunningham regards Kamatipura in the district of Kusa Vihara, as the capital of Kamarupa.
2. Brahma ch. 28; Rama Kis ch.42; cf Dey p. 158.
3. BS xiv.7; v.74,80.
4. Ibid. v.70; ix.15; x.14; xvi.3; lxxx.7. Variants are: Pundraka, Paundra, Paundrika. These names are sometimes used as equivalents (Sabha xii.384); but sometimes a distinction is made between the Pundras and Paundras (Bhisma,ix.358, 365; Sabha ii.1872-74).
5. Ait Br vii.18.
6. Sabha xii.384.
7. Vana ii.1936; Bhisma ix.365; Drona iv.122.
8. Watters ii. 184-85.
9. Day pp. 154.161. cf Elliot, Sir H., History of India, vol. iii, p. 288. For other views see JASB 1875, p. 188; 1897 p. 85; 1902 p. 267.
10. BS xiv.3.
11. Ibid. lxxx.7.
12. Ibid. xiv.6; iv.22.
13. ii.31.7.

culture outside the Aryandom,[1] who lived by catching fish.[2] It is quite possible that the aborigines living in the remote hills of the eastern Vindhya range, are meant by this term who were, of course, Non-Aryans.

[3] Samatatal: The Gangetic Delta. The country of Samatata i.e., San-mo-ta-t'a, according to Hiuan Tsang,[4] was on the sea-side and was low and moist.[5] Fergusson identifies it with the Dacca district whereas Rhys Davids[6] places it south of Dacca in the district of the modern Faridpur[7] and Bloch with lower Bengal. Epigraphical evidences, however, show that Samatata[8] comprised the districts of Comilla, Noakhali and Sylhet.

[9] Suhmas: The country of the Suhmas was a portion of the more comprehensive region[10] which was later known as Radha. Though in the Dasa-Kumara-Carita[11] Damalipti or Tamralipti (modern Tamluk) is described as having been[12] city of the Suhmas, while according to the Matsya Purana and Mahabharata,[13] Suhma and Tamralipti were distinct countries. The Tirumalai Rock inscription of Rajendra Cola (1025 A.D.) mentions Uttara-Radha and Daksina Radha as two

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1. Chanda, R.P., The Indo Aryan Races, p. 6. cf AIHT p. 290.
2. SBE xxv.p. 403 fn.7.
3. BS xiv.6.
4. Watters, ii, p. 187.
5. JRAS vol. vi, 1873, p. 242.
6. Watters ii, p. 188.
7. ASR 1902, in the supplement to the Calcutta Gazetteer Sept.17, 1902, p. 1203. See also Dey p. 175.
8. Dey p. 175. cf JASB 1915 pp. 17-18.
9. BS xiv.5; v.37; xvi.1.
10. HCAI p. 261; TAI p. 275; Dey pp. 164-65, 195.
11. ch. 6.
12. ch. 114.
13. Adi clxxxvi. 6993; Sabha xxix.1094-1100, etc.

different Janapadas.[1] It is suggested that the two Janapadas Brahma and Suhma, should be identified with the two divisions of Radha (Uttara and Daksina) comprising the modern districts of Hooghly, Howrah, Bankura, Burdwan and the eastern portions of Midnapore,[2] the river Ajay dividing them into north and south Radha.

Udra:[3] The kingdom of Udra or Odra or Wu-tu[4] (U-cha) oda corresponds to modern Orissa but during the sixth and seventh centuries A.D. it denoted the northern portion of Orissa[5] and comprised the whole of the present districts of Cuttack and Sambhalpur and a portion of Midnapur.[6] Pliny refers to these people as the Orotes.[7] The other portions of Orissa were occupied by the Utkalas and Kalingas.

Utkala:[8] Utkala comprised the region from Balasore to Lohardaga and Sarguja.[9] Utkala is a corruption of Ut-Kalinga which means north part of Kalinga.[10] The Bhuvanesvar stone inscription[11] of Narasimha I refers to Ekamra, modern Bhuvanesvara, as situated in Utkalavisya which shows that

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1. TAI p. 276.
2. CAGI p. 732. See also Dey p. 164.
3. BS xiv.6. 4. As Hiuan Tsang calls it. Watters ii, p. 193.
5. Waddell regards Yajapur as the capital of Udra. Ibid. p. 195.
6. CAGI pp. 585, 733.
7. Natural History, ii. p. 75.
8. BS xiv.7.
9. CAGI p. 733. cf JASB lxvi. 1897 p. 85. In the Mark p. 327 Pargiter mentions that Utkala comprised the southern portion of Chota Nagpur and northern tributary states of Orissa.
10. Dey p. 213.
11. HCAI p. 197. Kalidasa (Raghu iv.38) places Utkala to the south of the river Kapisa which has been identified with the Kasai flowing through Midnapore district of Bengal.

the Puri district was included in Utkala. It is held that Utkala and Odra are synonymous terms for modern Orissa[1] but in the ancient period both comprised to make present Orissa State.

Vyaghramukhas: Tiger-faced: They seem to be the residents of Vyaghratati identified with the modern Bagdi or Baghdi[2] or the Delta of the Ganges and Brahmaputra[3] which was called 'Tiger coast' (Vyaghratati)[4], evidently because it was them, as was in very recent times, infested by the 'Royal Bengal' tigers. Their identification with Bhagelas of Bhagelkhand is another possibility.

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1. JASB xi. 1945 no. 1 p. 7. cf Levi, Pre-Aryan and Pre-Dravidian India., Trans. P.C. Bagchi, p. 84; HBAI p. 76; and Dey p. 213.

2. BS xiv. 5.

3. CAGI p. 731.

4. Ashutosh Jubilee Vol. iii pt.ii pp. 422-24 cf EI vol. iv, pp. 243 ff.

SECTION IV

SOUTH EASTERN DIVISION

The various sources viz., the Puranas such as the Brahmanda, Vayu, Matsya, Vamana and Markandeya furnishes us with a list of 20 settlements each, and another list of the Markandeya Purana 26. Varahamihira, however, records as many as 28/29 names, the largest of all other accounts, in the following manner: Kosala, Kalinga, Vanga, Upavanga, Jathara, Anga (or Jatharanga), Saulikas, Vidarbha, Vatsas, Andhra, Cedi, Urdhvakanthas, Vrsadvipa, Nalikeradvipa, Carmadvipa, Vindhavasis, Tripuri, Smasrudharas, Hemakudyas, Vyalagrivas, Mahagrivas, Kiskindha, Kantakasthala, Nisadarastra, Purikas, Dasarna, Nagnasabaras, Pamasabaras, and Sabara-Vyadha-Caura-Samgha.

Eleven names out of the above list such as Upavanga, Saulika, Vatsa, Andhra, Urdhvakantha, Vrsadvipa, Carmadvipa, Smasrudharas, Purikas, Nagnasabaras and Sabara-Vyadha-Caura-Samgha do not find mention in the Markandeya Purana, whereas it includes few names such as Mrsaka, Dharmadvipa, Alika, Nisadha and Kakulalaka not mentioned in the account of the Brhat Samhita. Vyalagriva of the Brhat Samhita is given as Vyagragriva in the Markandeya Purana, Hemakudya as Hemakuta,

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1. 57.32 ff.
2. 58. 6 ff.
3. Urdhvakanthas, Smasrudharas, Vyalagrivas, Mahagrivas are fabulous terms and cannot be identified.
4. ch. 58.

Kantakasthala as Katakasthala, and Nisadrastra as Nisada.

Out of the list supplied by the other account of the Markandeya Purana[1] only five names viz., Dasarna, Kiskindhaka, Kosala, Traipura (Tripuri) and Naisada (Nisadarastra) are similar to those of Varahamihira or the Markandeya Purana[2], the other names in it being Saraja, Karusa, Kevala, Utkala, Bhoja, Tosala, Vaidisa, Tumbura-Tumbula, Patu, Malakaccha, Annaja, Tustikara, Virabotra and Avanti. Since both the accounts of the Markandeya Purana differ between themselves, their correctness can hardly be ascertained.

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1. ch. 57.
2. ch. 58.

MOUNTAINS

Kiskindha:[1] It is the mountain near Kupal, Mudgal and Raichur.[2] Its identification with a small homelet situated in Dharwad on the south bank of the river Tungabhadra near Anagandi,[3] three miles from Vijayanagara, is obviously wrong as it lies very far in the south.

Vindhya:[4] It is the modern Vindhya range corresponding to Ptolemy's Quindon, the source of the Namadus and Nanagouna identified with Narmada and Tapti.[5] Different parts of the Vindhya mountain known under different names viz., the Riksa, Pariyatra and Vindhya proper together make up the Vindhya,[6] dividing India into two rigid parts, the north and the south. Varahamihira[7] speaks of the Vindhya as one of the breasts of the earth, the other being the Himavat mountain i.e., the Himalayas. Since the Vindhyas are mentioned in the south east zone, it is quite possible that Varahamihira is referring to the eastern range of the Vindhyas in particular.[8]

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1. BS xiv.10.
2. HCAI pp. 21-22.
3. ASSI I p. 322. cf Rama Kis ch. 26.
4. BS xiv.9; xii.6; xvi.3;10,12; lxix.30; xliii.35. cf Mbh. ch. 104, 1-15; ASWI vol. iv. p. 109.
5. HCAI p. 19.
6. GE pp. 107 ff; HCAI p.301. cf Bharatabhumi p. 63.
7. BS xliii. 35. cf Gupta Inscriptions p. 184.
8. JRAS 1894 p. 261.

ISLANDS

Carmadvipa[1]: The island of the bark.

Nalikeradvipa[2]: The island of the Coconuts i.e., Nalikeradvipa is the Andaman and Nicobar islands in the Bay of Bengal[3]. Hiuan Tsang refers to it as Na-le-ki-le-chou and further remarks that 'the inhabitants of this island were dwarfs three feet high with human bodies and bird-beaks; they did not raise any crops and subsisted on cocoa-nuts'. His information seems to be from 'hearsay-source'.

Lanka[4]: The island of the Bulls.

RASTRAS

Nisadarastra[5]: According to the Manu Samhita[6] a Nisada was an offspring of a Brahmana father and a Sudra mother. Yajnavalkya[7] calls him by the name of Parasava. They were an Austro-Asiatic tribe living outside the Aryandom[8] whose profession was usually that of a fisherman or hunter[9]. This shows that they were being dragged into the Brahmanical society. Yaska gives them the fifth caste. Since the Nisadas are the aborigines and associated with the Vindhyas

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1. BS xiv.9.
2. Ibid. Another name for the Nalikeradvipa or Narikela or Nadikera is Nagnadvipa or its later variant Nagadvipa. cf Gerini, G.E., Researches in Ptolemy's Geography pp. 382 and 568-69; EVEJ vols. xx-xxi pp. 251-52.
3. Watters ii. 226.
4. BS xiv.9.
5. Ibid. xiv.10. cf Mbh. iii.120.3-4; AI ii.142; Mark p. 286.
6. x.8.
7. i.91.
8. Chanda, R.P., op.cit. p. 6; AIHM p. 290.
9. Manu x.48; Mbh xiii.48.12.

and are located somewhere in the south east zone by Varahamihira, they may be placed in the modern Baster State in the Madhya Pradesh.[1]

CITIES

Tripuri:[2] Tripura:[3] Tripuri[4] and Tripura[5] are identical. Tripuri is the modern Tevar or Teor seven miles to the west of Jabalpur on the river Narbada. Pargiter, however, identifies it with Mandhata on the Narbada. It has been described in Buddhist literature as one of the regular stages on the route from Paithan to Sravasti.[6] It was the capital of Raja Kokalladeva and other Kalachuri kings in the 9th century A.D. onwards.[7] It was also called Codinagara.

COUNTRIES AND PEOPLES

Andhra:[8] The Andhra territory lies between the Godavari and the Krishna.[9] The Mahabharata states that the Andhras were indigenous to the Deccan. The Ramayana also locates them on the Godavari.[10] The Jatakas mention a town Andhapura on the river Telavaha, identified with modern Bezwada.[11] Regarding

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1. cf SI p. 169; KI viii.44; HGAI p. 292; Burgess, Antiquities of Kathiawad and Kachha, p. 131; TAI p. 99; PHAI p.425; HNI p. 126; AI ii.142.
2. BS xiv.8.
3. Ibid. v.39 cf Mark ch. 116.
4. Dey p. 206 cf EI vol i pp 220,253;IA xxii. p.191.
5. CAGI p. 726.
6. IGI xvii. p. 9.
7. CAGI p. 725.
8. BS xiv.8; xi.59;xvi.11; xvii.25;Ait Br viii.18, as non-Aryan people.
9. xii. 207, 42.
10. Kis 41 ch. ii.
11. Pre-Buddhist India p. 370.

their ethnography some writers hold that they belonged to the Dravidian[1] stock, while according to others, they were originally a Vindhyan people who later on extended to the Godavari and Krishna valleys.[2]

Anga[3]: Anga comprised the modern districts of Bhagalpur and Monghyr in Bihar. It was one of the Solasamahajanapada,[4] shortly before the time of Gautama Buddha. The capital of the Angas was first called Malini, later on the name was changed to Campa or Campavati.[5] According to Cunningham the modern village called Campanagara and Campapura near Bhagalpur represents the site of the ancient city of Campa.[6] Epigraphic evidence, however, seems to suggest the location of the ancient city near the Lakhisarai station on the Eastern Railway,[7] in the Western fringe of the Monghyr district. It was situated on the river named Campa which formed the boundary between the Anga and Magadha.[8] Fa-hien and Hiuen Tsang[9] visited this kingdom while in India.

Cedikas[10]: Cedi[11]: Caidya[12]: The Cedi territory is Bundelkhand in

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1. IA 1913 pp. 276-78.
2. Ibid. 1918 p. 71; PHAI p. 92.
3. BS xiv.8; v.72; ix.10; x.14; xi.56; xxxi.15. cf Raghu iv.23; Atharvaveda v.22.14; Asta vi.1.170; ii.4.62; Vinaya Texts, SBE ii. 146n; Mahavastu ii.3.
4. Anguttara i.213; iv.252,256,260.
5. Mbh. xii. 5.134; Visnu iv.18.4.
6. AGI pp. 546-48.
7. JBRS vol. xii pt. ii p. 8.
8. Jataka iv. 454.
9. Legge p. 100; Watters ii. pp. 181-82. cf GAMI p. 83; Dey, pp. 7-8; JASB 1914 p. 317.
10. BS xiv.8.
11. Ibid. xvi.3; xxxi.22; xliii.8. cf Rgveda viii.5.37-39; Asta iv.2.116.
12. Ibid. xi.89.

the Madhaya Pradesh. During the Buddhas time, it was an[1] important centre of Buddhism.[2] According to the Mahabharata the capital of the Cedis is called Suktimati on the river of the same name identified by Pargiter[3] with Ken. The same city has been referred to in Pali Literature as Sotthivatinagara[4] which has been located somewhere near Banda.[5] The Cedis, it seems, had various settlements in different ages spread all over India.[6] King Kharavela of Kalinga belonged to the Cedi race.[7]

Dasarnas[8]: Dasarna[9]: Varahamihira mentions the Dasarnas in the west as well as in the south east. The latter formed a part of the Chattisgarh district in the Madhya Pradesh.[10] Vidisa (modern Bhilsa), on the Vetravati (Betwa) was the capital of western Dasarna.[11] The Dasarnas are the Dosarene or Desarene of the Periplus and Desaran of Ptolemy.[12] Schoff, however, on the authority of the Periplus identifies it with modern Orissa.

Hemakundya[13]: Hemakundya is the Malaya Archipelago, the land

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1. Anguttara v. 436-37.
2. Vana xxii. 398; 111.20.50.
3. AIHT p. 272.
4. Cetiya Jataka no. 422.
5. CAGI pp. 725-26.
6. cf CHI vol 1 p. 75; CL p. 82; Rapson, Ancient India p.162; Dey, p. 48; Aiyangar, Ancient India p. 8; BI p. 28; Abhidhana iv.22.
7. EI xx pp.72 ff.; IA 1919; IHQ xiv. pp 261 ff.
8. BS xiv.10.
9. Ibid. v.40; x.15; xxxi.21.
10. Visnu ii p. 160, fn.3. cf Sabha ch. 32; Kis 41.8-10; Mat ch. 114.
11. MP 23-24.
12. Periplus p. 47.
13. BS xiv.9. The variants are Hemakundya, Hemakuta, Hemakutya, and Hemakundya. Alberuni gives Hemakutya. Fleet prefers Hemakundya after Kern (IA xxii. p.179). In the printed text Parasara gives Hemakundya (Utpala p.288).

of gold, Khersonese. But if we accept the reading Hemakuta,[1] it is identified with Kailasa range of the Himalayas, which does not fit in well with our description.

Jathara:[2] Jatharanga:[3] Jatharanga may have changed into Jharakhanda in course of time which is generally identified with Chota Nagpur.[4] According to Buchanan,[5] all the hilly region between Birbhum and Benaras was called Jharakhanda, which also included the Santhal-Pargana.

Kalinga:[6] Kalinga:[7] Ganjam and Vishakhapatnam districts. According to the Mahabharata[8] it comprised modern Orissa to the south of the Vaitrani and the sea-coast southwards as far as Vishakhapatnam. The Amarakantaka range is mentioned as the western boundary.[9] Hiuan Tsang mentions[10] it as Ka-ling-Ka or Kalinga, distinguishing it from U-t'u or Orissa and kung-yu-t'o or Kongoda in the Ganjam district indicating that in his time Kalinga occupied a smaller area forming parts of modern Ganjam and Vishakhapatnam districts.[11]

The Calingae are mentioned[12] by Pliny as occupying the eastern coast of India below the Mandei and Malli and the famous

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1. Dey, p.75.
2. BS xiv.8.
3. Utpala p.288. Vanga-Upvanga-Jatharangah. Kern translates it as Vanga, Varga minor (and) the Jathara-Angas. Alberuni separates the names Jathara Anga. of HGTB pp, 107 ff.
4. Dey, p. 81.
5. Martin's Eastern India i. p. 32.
6. BS xiv.8; v.35,69,75,79; ix.10,26; x.16;xi.54;xvi.1,3; xvii.13,22; xxxi.15. cf Taittirya Aranyaka ii.1.1; Asta iv.1.170; Arth p. 50; Manu x.44; Patanjali iii.2.2.; Mbh. i.104; Raghu iv.38; DKC pp. 167,168,172.
7. Ibid. 38.
8. iii.114.4.
9. Vana cxiv. 10096-10107.
10. Watters ii. pp. 198 ff.
11. PHAI p. 88.
12. Natural History vi. 21.

Mount Malaya[1], which has been identified with the Mahendra mountain[2] which is again referred to by Kalidasa[3] as a part of the Kalinga Kingdom. According to the Mahavastu, Dantapura was the capital of the Kalinga country which has been identified with Raja Mahendri[4] corresponding to Ptolemy's Pitundra Metropolis[5]. Tri-Kalinga, mentioned in the inscriptions of the Kalachuris, are Dhanaka or Amaravati on the Krsna, Andhra or Warangal and Kalinga or Raj-Mahendri, corresponding to Pliny's Macco Calingae, Gangaridae-Calingae and Calingae. In the sixth century A.D. the eastern Gangas subjugated the kings of central Kalinga and the new royal house was established in Srikakulam District. Perhaps Varahamihira was referring to one of their Kings as Kalingadesa-narpati[6] or the lord of Kalinga. It was famous for diamonds[7].

Kantakasthala[8]: It may be identified with Gantasala, known as Kantakasaila[9] and Greek Kantakassules in ancient times.

Kantaka-nagara[10] is identified with Katwa in the district of Burdwan in Bengal.

Kosalai[11] It refers to the south Kosala identified with the Chhattisgarh area, Panna region known for the diamonds[12].

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1. CAGI p. 592.
2. Raghu iv.39; vi.54.
3. vol. iii p. 361.
4. CAGI pp. 592-93.
5. Ibid. p. 594.
6. BS v.69; xi.54.
7. Ibid. lxxx.7.
8. Ibid. xiv.12.
9. McC Meg p. 157.
10. Dey p. 89.
11. BS xiv.8. For details see Kosala in the Eastern division.
12. Ibid. lxxx.7.

Pauṇḍrikas[1]: It is modern Purd.

Śabaras[2]: Mantra Śabaras[3]: Pārvata Śabaras[4]: Śabara-Vyādha-Gaṇa-Devatās[5]: Kern identifies them with the phyllitoe of Ptolemy who occupied the banks of the Iaptā lower down than the Nammoi, and extended northward to the Satpura range.[6] In the Ajaigarh rock inscription[7] the Śabaras along with the Pulindas and Bhils[8] are described as wild tribes. The Kaumudī Mahotsava refers to the Śabaras living in the border of Magadha, which are obviously the same meant by Varahamihira. The Śabaras were an aboriginal tribes living in the different parts of India. Their main profession seems to be hunting.

Śaulikas[9]: See under Śulikas.

Upavaṅgas[10]: It was the sub-division of Vaṅga used for the first time by Varahamihira. The Upavaṅga region is generally identified with Central portion of the eastern part of the Gangetic Delta[11] i.e., the country to the east of the Bhagirathi including Jessore. Sen specifically equates Upavaṅga with Noakhali and Chittagong.[12]

Vaṅgas[13] Vaṅga[14]: Vaṅga, from which the modern name of Bengal is

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1. BS xiv.10. cf HV 11.38.20-22; Mark ch.57; AIHT p. 262.
2. Ibid. v.38; ix.15,29; x.15,18; xvi.1,33; lxxxvii.10.
3. Ibid. xxxii.15.
4. Ibid. xiv.10.
5. Ibid. lxxxvii.10.
6. Ptolemy p. 160.
7. EI 1. 337.22.
8. ABORI xii. pp.50 ff. cf JBORS xix. pp.113 ff.
9. BS xiv.8.
10. Ibid.
11. Dey, p. 211; History of Bengal, i p. 15.
12. HAIB p. 85. cf ASR xv. pp. 145-46.
13. BS xiv.8; v.72,73,79; ix.10; x.14; xvi.1; xvii.18,22; xxxii.15; Sabha ch.29; Bhasya iv.1.4; Artha p.82; CII iii.141.
14. Ibid. xi. 60.

derived, actually denoted broadly the eastern horizons of the present provinces during Varahamihira's time. The earliest reference to the Vangas is found in the Aitareya Aranyaka.[1] The Baudhayana-Dharma-Sutra[2] regards them as an impure people living outside the Aryavarta. The entire triangular tract bounded by the Bhagirathi, Padma and the Meghna estuary is known by the ethnic name Vanga.[3]

Vatsa: Kausambi, modern Kosam village on the left bank of the Jamuna about 30 miles to the west of Allahabad was the capital of the kingdom of Vatsa of Udayana.[4] The kingdom comprised the region between the Ganga and the Yamuna, near their confluence.

Vidarbha: In ancient times the country of Vidarbha included the kingdom of Bhopal and Bhilsa to the north of Narbada.[5] According to Kalidasa,[6] it lay to the south of Vidisa and the river Varada (Wardha) was flowing through it.[7] The Vayu Purana groups them with the Abhiras and Pulindhas whereas the Nasik record of queen Gautami-Balasri associates Vidarbha with Aparanta.[8]

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1. H.I.L.; Ait Ar 101,200.
2. ABORI xxix. 142. cf DKDI pp. 225-26; Hist. of Bengali Lit. pp. 38-41.
3. MSAI p. 182. cf. JASB 1897 p. 85; Dey, p. 22.
4. BS xlv.8.
5. Ibid.
6. Cunningham, Bhilsa Topes p. 363.
7. Mal.
8. ch. 46.135.
9. EI viii. 41.61.

SECTION V

SOUTHERN DIVISION

The number of settlements mentioned in the account of Varahamihira, in the southern division of India, is by far an exhaustive one. He supplies us a list of 61 ethnic groups residing in the region. Other sources like the Brahmanda,[1] Vayu,[2] Matsya,[3] Brahma,[4] and Vamana Puranas[5] give 28,28,27,27 and 28 settlements in this division respectively. The Markandeya Purana[6] in one account furnishes us with 51 and in another 27 names.[7] Varahamihira enlists the following names in this division: Lanka, Kalajinas, Sauris, Talikatas, Girinagara, Malaya, Dardura, Mahendra, Malindhya, Bharukacchas, Kankatas, Kankanas, Vanavasi, Sibikas, Phanikaras, Konkanas, Abhiras, Avaras, Vena, Avanti, Dasapura, Gonardas, Kerala, Karnatas, Mahatavi, Citrakuta, Nasikya, Kollagiri, Colas, Kraunca, Jatadharas, Kaveri, Rsyamuka, Vaidurya-Sankha-Muktadvipa, Atri, Varicaras, Dharmapattana, Ganarajya, Krsna, Vellura, Pisikas, Surpadri, Kusumanaga,[8] Tumbavana, Karmaneyakas, Yamyodadhi, Tapasasramas,

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1. ch. 49.
2. ch. 45.
3. ch. 114.
4. ch. 27.
5. ch. 13.
6. ch. 58.
7. ch. 57.
8. Malindhya, Kankanas, Avaras, Jatadharas, Ganarajya, Surpadri and Kusumanaga are not identifiable.

Raikas, Kanci, Marucipattana[1], Ceryas, Aryakas, Simhala, Raibha, Baladevapattana, Dandakavana, Timingalasanas, Bhadras, Kacchas, Kumjaradari, and Tamraparni. The following 32 names of the list of the Brhat Samhita are not mentioned in the Markandeya Purana.[2] Sauris, Talikatas, Girinagara, Malindhya, Kankata, Kankana, Vanavasi, Sibikas, Phanikaras, Avaras, Avantikas, Mahatavi, Jatadharas, Vaidurya-Sankha-Muktadvipa, Atri, Varicaras, Dharmapattana, Ganarajya, Vellura, Surpadri, Kusumanaga, Tumbavana, Yamyodadhi, Tapasasramas, Marucipattana, Aryakas, Baladevapattana, Dandakavana, Timingalasanas, Bhadras, Kacchas and Kumjaradari. It includes 8 names such as Saulika, Nikata, Karkotakavana, Akanina, Maharastra, Ankhavana, Daksinaksurusa, and Telanga other than those mentioned by Varahamihira, whereas it gives the names of Bhrgukaccha and Karmanayaka in place of Bharukaccha and Karmaneyaka of the list of Varahamihira respectively.

The list supplied in the other account of the Markandeya Purana[3] is very different from both the accounts of Varahamihira and that of its first list of itself and consists of names such as Pundra, Kevala, Golangula, Sailusa, Masika, Kusuma, Namavasaka, Maharastra, Mihisaka, Kalinga, Abhira, Sahavaisikya, Adakya, Sabara, Pulinda, Vindhyamauleya, Vaidarbha, Dandakavana, Paurika, Maulika, Asmaka, Bhogavardhana, Naisika, Kuntala, Andhra, Udbhida and Vanadaraka. It will thus be observed that there are considerable variations in the accounts of Markandeya Purana.

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1. not identifiable.
2. ch. 58.
3. ch. 57.

RIVERS:

Kaveri:[1] It is the modern Kaveri. It rises from a spring called Candratirtha in the Brahmagiri mountain in Coorg.

Bhavabhuti[2] tells us that the slopes of the Malaya mountain are encircled by the river Kaveri.

Krsna:[3] It rises near the Mahabalesvara in the western Ghats and flows into the Bay of Bengal in the district of Nellore on the coromandel coast at Sippelem a little south of Masulipatam.[4] It is mentioned in the Bhagavatpurana. The united streams of Krsna and Veni are called Krsnaveni.

Tamraparni:[5] It is clear that it refers to a river or not to Ceylon. The river Tamraparni rises in the Agasti-Kuta mountain flowing through Pallamcota, falls into the Kolkhic Gulf[6] or Gulf of Manar near Punakail. The Bhagavatapurana also refers to it as a river. The port of Korkai was situated, according to Ptolemy, at the mouth of this river, which was well-known for its pearl-fishery. According to Varahamihira Tamraparni was noted for its pearls, which is supplemented by Kalidasa.[7]

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1. BS xiv.13; v.64.
2. Malatimadhava, v.42.
3. BS xiv.14. Kern took this word, with the one that follows it in the text, to give the name of a place - Krsnavellura. But Varahamihira undoubtedly mentions the river Krsna and the town of Vellura separately.
4. v.19; Agni ch. 118; Rama Kis ch.4.
5. BS xiv.16; lxxxi.2,3. cf Smith, Asoka, 3rd ed p. 162; Barua, Asoka, ch. iii.
6. iv.28,35; xi.5,30.
7. Raghu iv. 49,50.

Yama[1]: It is a tributary of the Krsna river, the combined stream of the two rivers being often mentioned as Krsnavena or Krsnavenī.[2] It rises in the western Ghats. Varahamihira states that the diamonds got from the banks of the Vena river are of the purest kind.

ISLANDS

Dharmapattana[3]: Calicut.[4] Kern translates the name by 'Yama's city'. Yama is generally called the lord of the south and Dharma is another name for Yama.

Kraunca-dvipa[5]: Krauncapura may be identified with Banavasi in North Kanara on the river Baroda, an affluent of the Tungabhadra.[6]

Varicaras[7]: The Varicaras i.e. mariners may denote the people engaged in the sea trade, of the southern coastal regions or the Pirates of the Greek sources.

Vaidurya-Sankha-Mukta[8]: The regions of Beryl, Mines, Conchshells, Pearls may be identified with the Pak Strait islands situated between the Indian coast and Ceylon, which are still popular for pearls etc. Hiuan Tsang[9] refers to these islands possibly as the 'Island of Precious Substances'. Of these

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1. BS xiv.12; iv.26; xvi.9; lxxx.6.
2. Ibid. lxxx.6.
3. Ibid. xiv.14.
4. Sewell, Sketch of the Dynasties of Southern India, p.57.
5. BS xiv.13.
6. Dey, p. 104.
7. BS xiv.14.
8. Ibid.
9. Watters ii. 236.

islands Mukta may be identified with Muttukorai in the Ramanath district in South India, which is popular for its pearl fisheries.

Timingilasamgi[1]: It refers to the people of Timingila living on the sea-fish. Timingila country has been identified with the Mandigala valley (corruption of Timingila) in the district of Madura.[2] Ptolemy refers to this country as tangala and Taga.

OCEANS

Yamvodadhi[3]: Indian ocean.

MOUNTAINS

Citrakuta[4]: It is the modern Citrakuta or Chatarkot hill near Kampta (Kamptanathgiri or Kantanathgiri) in Bundelkhand,[5] which is about four miles from the Chitrakut station. There are two rivers at Chitrakuta called the Mandakini and Malini.[6]

Dardura[7]: The Nilgiri hills[8] in the south India. Kalidasa describes the Malaya and the Dardura[9] as the breasts of the southern region.

Mahendra[10]: The Mahendra mountain extends from Ganjam to Madura. Eastern Ghats were known as Mahendraparvata in the Ramayana.[11]

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1. BS xiv.16.
2. Dey, p. 204.
3. BS xiv.15.
4. Ibid. 13; xvi.17. cf Padma ch.21; Uttararamacaritam, act 1.24; Lalitavistara p. 391; IA xli. p.218; Rama Ayodhya ch.55.
5. JRASB vol xv 1949 p. 129; JRAS 1894; Upadhyaya pp.9-10,16,23, 26,70; HGAI pp. 20,73-74, 313-14.
6. Raghu xiii.48; Rama Ayodhya liv.39; lvi.7,8.
7. BS xiv.11.
8. Dey, p. 53.
9. Raghu iv.51.
10. BS xiv. 11; xvi.10. cf IA vol xxii p. 134.
11. Aranya lxiv.10-14. cf Mark p. 305; HGAI p. 22.

According to the Bhagavatapurana[1], the Mahendra mountain is situated between the Ganga-sagara-sangama and the saptagodavari. Pargiter[2] states that Mahendra hills of the Ramayana and those of the Puranas are the two different ranges but Ray Chaudhuri[3] holds that the same range of hills is meant by the authors of the Ramayana and the Puranas. A portion of the eastern Ghat near Ganjam is still called the Mahendra hill.[4] It is described as a mountain par excellence of the Kalingas.

Malaya[5]: The Travancore hills extending from Coimbatore to Cape Comorin.[6] Bhavabhuti tells us that the slopes of the Malaya mountain are encircled by the river Kaveri. Kalidasa describes[7] the Dardura and Malaya as the breasts of the southern region.[8] It has been described as one of the Kulaparvatas of India. It is the same as Tamil Podigai or Podigai the Bettigo of Ptolemy. It has been described as the mountain par excellence of the Pandyas.[9]

Rayamuka[10]: The Rayamuka mountain range is eight miles from Anagandi on the bank of the river Tungabhadra from the evidence of the Ramayana from where the river Pampa rises which falls into the Tungabhadra after flowing westward.[11] Pargiter,[12]

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1. x.79.
2. Mark p. 305.
3. HIA pp. 108-9.
4. Mbh ii.30.5 ff.
5. BS xiv.11; xvi.10; xxvii.2. cf ASWI iv. p. 109; Bharatambhumi p. 90.
6. Mahaviracarita v.3.
7. Raghu iv.51.
8. Mark lvii.10.11.
9. Mbh. ii.30.5 ff.
10. BS xiv.13; Rama Kis ch. iv; Mark lvii.13.
11. HGAI p. 186.
12. JRAS 1894, p. 253.

however, identifies it with the range of hills stretching from Ahmadnagar to beyond Naldrug and Kalyani dividing the Manjira and the Bhima rivers.

FORESTS

Dandakavana: **Dandaka**: Region between Vindhya mountain and Godavari river.[1] It is the great forest belt, celebrated in the Ramayana[2] in connection with the Rama's exile. According to Pargiter, it included the whole of Central India from the Bundelkhand region[3] in the north, Kalinga in the east and Vidarbha[4] in the west. The inclusion of Vidarbha within Dandaka[5] is also suggested by Kautilya. The Mahabharata[6] gives Godavari the southern limit of the forest. A king of the Dandaka forest[7] has also been alluded by the astronomer.

Tumbavana: Tumbavana[8] may be identified with the forest of the Tumbura country[9] which is situated within the Vindhya range.

Mahatavi: Mahatavi[10] may be the same as Mahavana, mentioned in an old inscription, which is identified with the present Jaypore forest region[11] in Orissa in the eastern Vindhyas. Braj

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1. BS xiv.16; cf HC ch.1; Milinda Panho p. 130; Raghu xii.9; Bhagawata ix.11.19; Padma ch. 21.
2. Ibid. xvi. 11.
3. Adi i.v.46; Uttara lxxix.18-20.
4. JRAS 1894 p. 242.
5. Arth p. 11. cf Dey p. 52; IA xxii p. 176.
6. Sabha xxx.1169; Vana lxxxv.8183-84. cf Uttararamacarita act ii. pp. 24-26.
7. BS xi.56.
8. Ibid. xiv. 15.
9. Dey, p. 207.
10. BS xiv.18.
11. KHMI pp. 152-53. cf IHQ i pp. 251 ff.

or Gokul were also known as Mahavana.[1]

CITIES

Abhi-ashrama: The hermitage was visited by Rama with Laksmana and Sita, while the sage was living there with Anusuya.[2]

Akaraï: It denotes Eastern Malwa.[3] Kern following Utpala, translates the word Akara by " the mines" and locates it in the modern Khandesh.[4] In the Junagadh inscription of Rudradaman, the text has Akar-Avanti, i.e. the eastern and western Malwa.[5] The most important city of Akara was Vidisa. Akara and Avanti are closely associated in the epigraphical records of ancient India.[6]

Bharukaccha: It is modern Broach, having another variant in Bhrgukaccha and was situated on the right bank of the Nai-Mo-Ta or Narmada.[7] To the Greeks, Ptolemy and the writer of the Periplus it was known as Barygaza.[8] Hiuan Tsang also locates it in southern India.[9] But the author of the Periplus notes that below Barygaza the coast turns to the south, whence that region is named Dakhinabades (Daksinapatha), hence placing it in western India.[10] It was very flourishing and rich sea port on western sea-board of India[11] and was in regular trade connections with the islands of South East Asia (Sunnvasbhumi).[12] Bharukaccha

1. Padma ch.40; Adi chs.12,15; cf. Dey, p.70.
2. BS xiv.14. cf Utpala p. 289.
3. Ibid. 12. cf Ibid.
4. Bombay Gazetteer i pt.i p.36 n. cf IA vii p.259.
5. EI xvi p.239; vii p. 61.
6. SI pp. 172, 192.
7. BS xiv. 11; v.40; xvi.6; lxix.11. cf Utpala p.141; ASWI iv. pp. 96, 109.
8. India as described by Ptolemy, pp.38,40,153,287.
9. Watters ii. 241.
10. Schoff p. 41.
11. Ibid. p. 42.
12. Jataka iii. 128; iv. 137.

was also called Bhrgupura.[1]

Dasapura: It is the modern Mandasor, or more properly Dasor[2] (as known to the people of neighbouring village)[3] in Malwa. The court panegyrist of Yasodharmana of Dasapura[4] gives a vivid poetic description of the royal territory extending from the river Reva[5] to the Paripatra mountain and the region of the lower Indus.

Girinagara: It is the famous Girnar mountain[6] about 10 miles East of Junagadh in Kathiawad, a sacred hill (3500 ft. high) to the Jainas as it contains the temples of Neminatha and Parsvanatha. It is also famous for its inscriptions of Asoka (covering over 100 sq feet of rock). There were unearthed two more important inscriptions[7] belonging to Rudradamana and another to Skandagupta[8] according to which it was the capital of Surastra and the Viceregal seat of the Provincial Governors of Candragupta Maurya, Asoka and of the Imperial Guptas. It is a great irony that the name has now passed over to the mountain Girnar and the ancient city is now represented by Junagadh, at the foot of it. The original name of the Girnar mountain was Urjayat.[9] It was also called Raivataka mountain.[10]

Kanci: It is the modern Conjeeveram[11] on the river Palar, 43 miles south west of Madras. The region of Kanci was called

1. Prabandhacintamani p. 136.
2. BS xiv.12.
3. IA xxii p. 178; CII iii.p.79. of EHNI pp. 176-77.
4. CII iii. p. 152.
5. HCAI p. 281.
6. BS xiv.11.
7. EI viii pp 42 ff. ; IA vii 1878 p. 257.
8. CIi iii p. 56.
9. IA xxii p. 178.
10. Sisupalavadha ch. iv.
11. BS xiv.15; Bhagavata x.79.14; Skanda ch.i.19-23; Mbh Bhisma ch ix. of CII iii p.12; Watters ii. 226-28; AGI p. 462; Ancient India and South Indian Culture, i pp.520 ff.

Tonda-mandalam. There are temples of Kailasanathasvamin built in the Pallava style of the 8th century architecture and Rajasimhaparmesvara.

Kollakiri[1]: Coorg on the Malabar coast. It was also called Kodagu[2]. It is mentioned as Kollagira[3] in an inscription at Terdal[4]. Kollagiri occurs in the Mahabharata[5] and the Markandeya Purana[6] and in Visnu Purana as Koragiri. Fleet, however, identifies it with Kolhapur (Kolapur) in Maharastra State, which is obviously wrong.[7]

Marungapattanam[8]: The name suggests that the place, possibly, was a popular centre of red-pepper. It may correspond to Muziris identified with Cranganore ten miles east of Ponnani in Cochin State.[9]

Nasikya[10]: It is the modern Nasik in the Maharastra State. The present form Nasik[11] appears to be established by inscriptions at Bedsa and at Nasik itself. Ptolemy designates as Nasika and the Mahabhasya and Nasikya.[12]

Vanavasi[13]: Banawasi in the north Kanara District, above the Ghats. Vanavasi was the capital of the Kadamba dynasty upto the sixth century A.D.[14] Ptolemy refers to it as Banaosasei.

1. BS xiv.13.
2. Dey p. 101.
3. IA vol xiv. p. 23.
4. Sabha ch. 30.
5. p. 364.
6. ch. 57.
7. IA xxii p. 152.
8. BS xiv.15. Parasara gives only Maricai, Utpala p. 290.
9. CAGI p. 743.
10. BS xiv.13; xvi.12.
11. ASWI iv pp. 89,98.
12. IA 1893 p. 113; 1894 p. 28.
13. BS xiv.12; ix.15; xvi.6.
14. McC Ptolemy p. 176.

Yellura[1]: Bellur in south India.

COUNTRIES AND PEOPLES

Abhira[2]: Varahamihira[3] also refers to the Abhiras living in the south Western sector of India. It seems that there were many branches of the Abhiras settled in various parts of India. The tribe can still be traced in the present Ahirs who live in the Uttar Pradesh, Bihar, Nepal and some portions of Rajputana and are mostly agriculturists and cowherds.

They are mentioned as Daksinapatha-vasinah in the Vayu[4] and the Markandeya Puranas[5]. Barnett[6] identifies the Abhiras of the southern branch with the Ayars of south India who brought into the south the worship of god Krsna.[7] Their country is placed on the Vindhya between the Konkana in the south and the Tapti in the north west. Smith locates the Abhiras, mentioned in the Allahabad inscription of Samudragupta[8], in the province of Ahirawada[9] between Jhansi and Bhilsa. The Vamsavalis of Nepal on the other hand mention that the Abhiras had a settlement in Nepal in very early times.[10]

They were a foreign tribe and possibly entered into

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1. BS xiv.14. cf Dey, p.28; IA xxii p. 198.
2. Ibid. xiv.12,18; v.38,42; ix.19; xvi.31.
3. Ibid. xiv.18.
4. ch. 57. 45-48.
5. ch. 58. 22; ch.45. 126.
6. CHI p. 529.
7. Saktisangama bk iii ch vii.20.
8. CII iii p. 14; EI xxii p. 36.
9. JRAS 1907 p. 891.
10. Levi, Le Nepal, ii pp. 156-59; iii pp. 102-9.

India during the confusions after Alexander's invasion.[1] The country of the Abhiras has been mentioned as Abiria in the Periplus and as Aberia in the Geographike of Ptolemy,[2] according to which it formed a part of the Indo-Scythia or the lower Indus valley.[3] According to the Mahabharata, they settled at a place where the river Saraswati disappears in the sand i.e., the present Hissar in the Haryana.

Andhras:[4] They may be identified with the Ayars of south India.

Avantakas: Avantis:[5][6] The Avantakas were the residents of Avanti which roughly corresponds to modern Malwa, Nimar and adjoining parts in the Madhya Pradesh. Ujjayini was the capital of Avanti.[7] From the 7th and 8th centuries onwards it was called Malwa.[8] Vidisa was the capital of Avanti during the time of the Sungas.

Bhadrakas:[9] See under the Central Zone.

Cerakas: Keralakas:[10][11] Cerya is a corruption of Kerala, which roughly corresponds to the modern Kerala State. It is however, suggested that in the ancient period, it comprised the present kingdom of Mysore, Coimbatore, Salem, South Malabar, Cochin and

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1. GBI p. 712.
2. MI vii pp. 36 ff. cf PHAI pp. 498-99; CA p. 192.
3. ix.37.1; vii.19.6. cf TAI p. 79; Herzfeld, Palmli, pp.35-51.
4. BS xiv.15.
5. Ibid. 12; v.73; xiv.33.
6. Ibid. v.40; ix.17,18,21; xi.35. Asta iv.1.176; Bhasya iv.1.1.; Raghu iv.32; Bhagawata x.45.31; x.58.30; Vana iii.89.8364.
7. BI p. 28.
8. Mala p. 10.
9. BS xiv.16.
10. Ibid. 15.
11. Ibid. 12. cf Rama iv.ch.41; Sabha xxx pp. 1174-75; Mark ch. 57.45; Vayu xlv. 124.

Travancore regions.[1] But Mysore was a separate kingdom known as Gangavadi, which was ruled by the Gangas from the times of the Calukyas of Badami. The Capital of the Ceryas was Skandapura situated at a short distance to the west of Cusselhati Pass.[2] The author of the Periplus refers to it as Cerobothra and its ports of Naura, Tyndis and Muziris.

Colas:[3] The Cola region extended along with the eastern coast, from the river Pennar to the Vellar, and on the west reaching to about the borders of Coorg comprising the Trichinopaly and Tanjore districts and a part of the Pudukottai.[4] Its capital was Uraiyur (old Trichinopoly), on the Kaveri, Sanskritised as Uragapura, Argaru of the Periplus,[5] orthoura of Ptolemy[6] also known as Koli, in the second century A.D. Kaneipura, Combaconum and Tanjore were the various capitals in the eleventh century A.D.[7] Kaveripattana or Pugar or Puhar was an important sea-port of the Colas. The Colas are the only power in the Indian History who ruled outside India in the South East Asian islands.

Gonardai:[8] A place near Ujjain. The city of Gonarda has been mentioned on the route from Paithan to Sravasti between

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1. CHI p. 539; Dey, p.48; CII iii p.7; PHAI p.539; EHNI p.153.
2. JRAS 1846, p. ii.
3. BS xiv.13; v.40; xi.61; xvi.10,38. Asta iv.1.175; Rama iv.ch.41; Mark ch.57.45; Vayu ch.45.124. The Chinese refer to it as Chu-Li-Ye (Beal, ii p. 227); Chu-Li-Ya (Watters, ii, p. 224).
4. Shastri, K.A.N., Colas i p. 22. of PHAI p. 271, 4th ed.
5. Schoff p. 41.
6. Ptolemy pp. 64-65; 185-86.
7. EI iii p. 283.
8. BS xiv.12; ix.13; xxxii.22. The expression Gonardiya has been referred to in the Mahabhasya i.1.21; i.1.29; iii.1.92; vii.2.101.

Ujjayini and Bhilsa.[1] It is associated with the birth place of Patanjali which[2] is located in the Madhya Pradesh by some and in the Deccan[3] by others.

Kaccha:[4] Modern Cutch. It is identified with K'i-T'a of Hiuan Tsang.[5]

Kaunkana: **Konkana:**[6] [7] It denotes precisely the whole strip of land between the western Ghats and the Arabian sea.[8] Tana was the capital of Konkana, according to Alberuni.[9] They are identified with the Cocondoe of Pliny.[10] Hiuan Tsang's[11] Kung-kan-na-pu-lo i.e. Konkona had capital at Konkonapura identified with Annagundhi on the north bank of the Tunghabhadra[12] river. Burgess, however, identifies with Kopal or Kohanur, 335 miles from Nasik.

Kankatas:[14] Does it refer to Kanakas which are identified with the residents of Travancore?[15]

Karnata:[16] The Karnata country denotes a part of Carnatic between Ramnad and Seringapatam.[17] It is the same as Kuntaldesa.

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1. IGI xvii. p.9; CAGI p. 726.
2. IU p. 98.
3. IHQ ii p. 268. cf Dey, p. 71.
4. BS xiv.16.
5. Watters ii p. 245. cf CAGI pp. 347-48; AGI pp. 254-55.
6. BS xvi.11; Mark ch. xxv.
7. Ibid. xiv.12. Fleet reads Tankana (IA xxii p. 171).
8. Bombay Gazetteer i pt ii p. 238 n. cf AGI p. 465.
9. i. 203.
10. CAGI pp. 632-33; AGI pp. 464-65.
11. Watters ii. 237.
12. AGI p. 464.
13. IA 1894 p. 28.
14. BS xiv.12; Bhagavata v.6-7.
15. Dey, p. 88.
16. BS xiv.13.
17. Saktisangam bk iii ch. vii.16. cf GAMI p. 89; Dey, p.94.

Karnata is a Sanskritised form of Kan-nadu i.e. black country. It is the country of the Kanarese[1] speaking people. The kingdom of Vijayanagara was called Karnata.[2] The Mysore State was also known by the name of Karnataka.

Kalajina:[3] Kalajar is a corruption of Kalajina or Kalanjana, a hill fort in the Baduna sub-division of the Banda district in Bundelkhand, where Sher Shah Suri lost his life.

Karmanyakas:[4] Baroda region. Some of the inscriptions mention Karmaneya, Kananiya and Kanyanijja, identified with the modern Kanoj[5] in the Baroda territory.

Kerala:[6] See under Cera.

Kunjaradari:[7] Elephants glen. The Mysore forests abounding in elephants are most probably referred to here in the Kunjaradari.

Lankai Simhalai:[8] [9] Both the terms denote Ceylon. Hiuan Tsang[10] refers to it as Seng-ka-lo. Fleet, however, prefers to regard Lanka, not the island of Ceylon, but the capital City,[11]

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1. IGI vol iv.
2. JRAS 1912 p. 482.
3. BS xiv. 11. cf KI i p. 218.
4. Ibid. 15.
5. IA xvii pp. 184, 198.
6. BS xiv. 12.
7. Ibid. 16. cf Hastikhanda, Utpala p. 289.
8. Ibid. 11.
9. Ibid. 15.
10. Watters ii. 232-34. Lenga-ka (Lanka) has been mentioned as a mountain.
11. IA xxii p. 183.

separate reference to which was perhaps thought necessary by him because it provides the Hindu prime meridian. Elsewhere Varahamihira says that Ujjayini and Lanka are situated on the same meridian.

Pisikas[1] Pisikas may represent the residents of Pistapura identified with Pithapura in the Godavari district, which was conquered by Samudragupta during his south Indian Digvijaya.

Phanikaras[2]: Phanikaras are possibly the people living along the banks of the river Phena, a tributary of the Godavari, whence they derived their name.

Sauris[3] According to a Jaina work Dhalasagara[4], Sauri, king of Mathura, removed his capital to a newly built city named Sauripuri, while his young brother Suvira remained at Mathura. Sauri possibly migrated to south India where he constructed a new city, Sauripuri whose residents later came to be designated Sauris.

Sibikas[5] Sibikas seem to be a branch of the Sivis who migrated to south India. Sivis had a number of settlements in India: Swat valley with Arishtapur as capital; Mewar with Jetuttara, identified with Nagari, 11 miles north of Chitor;

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1. BS xiv.14.
2. Ibid. 12.
3. Ibid. 11.
4. SBE xlv p. 112.
5. BS xiv.12.

and another settlement was at Sibipura identified with Shorkot in the Jhang district.

Simhalai[1] See under Lanka.

Rsabhas[2]: The Palni hills in Madura locally called Baraha Parvata, are the Rsabha mountains, hence the people of the Rsabha mountains[3]

Rsikas[4]: Rsikas are the people living in the vicinity of the Rsyamuka mountain, the source of Pampa river, which falls into the Tungabhadra after flowing westward.

Kalikata[5]: It may be identified with Talkada, the capital of the Ceras or Cola, on the Kaveri, 30 miles to the east by the south of Mysore now buried in the sands of Kaveri.[6] The ancient name of Talkada[7] was Talavanapura. It was the capital of the Ganga[8] dynasty in the third century. This region, roughly south Mysore was called Gangavadi-Ninety-Six-Thousand.

Tapasasrama[9]: Pandharpur in Maharastra State.[10] Tapasasrama is identical with Ptolemy's Tabasoi.[11]

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1. BS xiv.15.
2. Ibid.
3. Vana ch. 85.
4. BS xiv. 15.
5. Ibid. 11.
6. Dey, p. 202. of IA xxii. p. 191.
7. EI iii p. 185.
8. JRAS 1911 p. 815.
9. BS xiv. 15.
10. Bombay Gazetteer i pt i p. 511.
11. Ptolemy p. 158.

SECTION VI

SOUTH WESTERN DIVISION

The section of the south western division of India has its own importance. Varahamihira is the only source among all the galaxy of Indian sources which mentions this division, except the Markandeya Purana,[1] and which too, records the names of 25 settlements of the division only in one account and omits it in another account. The settlements of this division are ordinarily mentioned in the western division of Puranic accounts in a very general manner.

The account of Varahamihira enumerates as many as 29 names such as Pahlavas, Kambojas, Sindu-Sauviras, Vadavamukhas[2], Aravas, Ambasthas, Kapilas, Narimukhas[2], Anartas, Phenagiri, Yavanas, Margaras[3], Karnapraveyas, Parasavas, Sudras, Barbaras, Kiratas, Khandas, Krvyadas[3], Abhiras, Canculkas, Hemagiri, Sindhu, Kalaka, Mahamava, Raivatakas, Surastra, Badaras and Dravidas. The list of the Markandeya Purana does not mention 12 names of that of the Brhat Samhita viz., Aravas, Ambasthas, Kapilas,

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1. ch. 58.
2. Vadavamukhas and Narimukhas are fabulous and ambiguous terms and cannot be identified.
3. Margaras and Krvyadas are not identifiable.

Phenagiri, Yavanas, Margaras, Narimukha, Khandas, Krvyadas, Abhiras, Canculas and Badaras and Karnapraveya of the list of Varahamihira is mentioned as Karnapradheya in the Markandeya Purana, whereas 8 names of the list of the Markandeya Purana such as Dravana, Aginga, Vanitamukha, Parada, Pandya, Kala, Dhartaka, Darada are not included in and the account of Varahamihira. The names of Paradas, Pandyas and Daradas appearing in the list of the Markandeya Purana should have been included in the north western division as done in the Brhat Samhita. Varahamihira's division of the western section into south western division evidently helps to locate the settlements more precisely and correctly.

RIVERS

Sindhu[1]: It is the modern Indus river. According to Alberuni the upper course of the Indus above the junction with the Chenab was known as Sindhu, lower that point to Aror it was known by the name of Panchanad, while its course from Aror down to the sea was called Mihran.[2] Varahamihira mentions it both as the country and the river. It is a trans-Himalayan river. Rising from the snows of western Kailasa in Tibet, the Sindhu first flows north west for about half of its length and then reaching the Darad country in the north west of Kashmir and south of Little Pamir it takes a southward course along which lay its most famous places. Other identification of the Sindhu is with the river Kali Sindh, a tributary of the Chambal in Malwa.

OCEAN

Mahasnava[3]: The Arabian sea.

MOUNTAINS

Ekasakira[4]: Monier Williams locates it near the mouth of the river Indus.

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1. BS xiv.19; iv.22; v.66,80; ix.19; x.6; xvi.10,16,21; xviii.6. cf Asta iv.3.22,33,93; Bhasya i.3.1.
2. i p. 260. cf Watters i p. 120; PHAI p. 620.
3. BS xiv.19.
4. Ibid. 18.

Raivata[1]: The Raivata mountain is situated opposite to Girnar hill. It is said to be the source of the rivers Palasini and Sikata-vilasini[2].

CITIES

Kalaka[3]: It may be identified with Kolkhoi of Ptolemy[4], corresponding to Tuticorin at the mouth of the river Tamraparni in Tinnevelly. But it lies very far in the south.

COUNTRIES AND PEOPLES

Ambasthas[5]: The Abastanoi (Arrian) Sambastai (Diodorus), Sabarcae (Curtius), or Sabagrae (Orosius) of Alexander's historians and Ambutai of Ptolemy are the same as the Ambasthas[6]. They had a settlement on the lower Akesines (Chenab) identical with the Malava territory, but above the confluence of the Chenab and the Indus[7]. The Puranas as well as the Mahabharata refer to them as Ksatriyas[8] whereas the Smrti literature seems to point to their mixed origin[9]. Sometimes before Varahamihira they seem to have migrated to the neighbourhood of Mekala hill, the source of the Narmada and some of them migrated further to the east in Bengal in later times[10] where they can still be traced.

Aravasi[11]: They should be identified with the Arabitae of the Greeks, a people of the Dravidian stock who were settled near

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1. BS xiv.19; xvi.31.
2. CII iii p. 60.
3. BS xiv.19.
4. Dey, pp. 86,102.
5. BS xiv.17. Ambattha in the Pali (Digha i p. 88).
6. McCrindle, Invasion of Alexander, pp. 292 ff.
7. PHAI p. 255. cf Bhisma ch.20.10; Drona ch.119.14; AIHT p.109; JA 1926 pp. 1-55.
8. AIHT p. 264.
9. GDS iv.16; Yaj i.91,95; SLAI pp 16-17.
10. IAI pp. 96 ff.
11. BS xiv.17.

the Hab river in Baluchistan during the time of Alexander.[1] Ethnologically they belonged to India.

Abhiras[2] See under the southern zone.

Anartas[3] It denotes north Gujarat with its capital at Dvaraka.[4] According to some,[5] it is located around Vadanagar. According to the Skand Purana,[6] there was a hermitage in this country full of ascetics chanting Vedic hymns.

Barbaras:[7] Indus Delta.[8] Barbarika, Barbari of Ptolemy[9] and the Barbarike Emporium of the author of the Periplus[10] are the same, being identical with the Barabara country, and Patala (modern Brahmanabad),[11] was the chief town.

Badaras[12] Bidar region. The Badaras were probably identical with Hiuan Tsang's O-cha-li or Badari or Vadari, who occupied the modern Bidar region[13] in the province of Gujarat. Bidar is a corruption of Ilvadurga.[14] In the seventh century A.D. "Badari seems to be/large kingdom bounded by Ajmer Ranthambhor on the /a north, by the Loni and Chambal on the east and west and Malava frontier on the south and extended from the mouth of the Banas river to the Rann of Cutch to the Chambal near Mandasor"[15]

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1. CHI p. 341.
2. BS xiv.18.
3. Ibid. 17; v.80; xiv.33; xvi.31. cf SI p. 172; EI viii pp.36 ff; IA vii pp. 262-63.
4. Dey, p.7; AGI p. 698; Dictionary of Proper Names in the Mahabharata p. 433.
5. NGAI p. 276.
6. Ch I. 5-6.
7. BS xiv.18; v.42. cf Asta iv.3.93; Mark lvii.39.
8. CAGI pp. 692-95; Panini p. 62.
9. pp. 146, 148.
10. Schoff, pp. 37,39.
11. Smith, EHI 4th ed p. 107.
12. BS xiv.19. The Badara people are not referred to by Parasara.
13. CAGI pp. 100-101. cf JASB x, p. 668.
14. Dey, p. 15. cf CAGI pp.565-68. 15. CAGI pp. 565-68.

Cancukas[1]: The Cancukas may be identified with the Cucukas, mentioned in the Mahabharata[2] along with the Pulindas, Andhras etc. as the residents of the Daksinapatha. They may be located near the mouth of the Narmada river.

Dravida[3]: Tamilnad, including Madras to Seringapatam and Cape Comorin. The traditional boundary was Konkana and Dhanakakata[4] on the north, and Malakuta on the south. Varahamihira[5] mentions the rulers of Dravida suggesting thereby that the country was not under one monarch but was divided into small independent principalities. He further gives the division himself[6] and refers to the eastern half of the Dravida country. It is strange that Varahamihira locates it in the south west zone and not in the south sector. Can we infer that it refers to some Dravidian tribe in the west, perhaps the Brahuis in Baluchistan, who belonged to the Dravidian stock?

Kapilas[7]: The Kapilas had a settlement on the Narbada river. A place named Kapiladhara is twenty four miles to the south west of Nasik[8].

Karnapraveya[9]: Karnapraveya may be identified with Karaviraputra corresponding to modern Kolhapur in Maharastra[10].

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1. BS xiv.18.
2. xii. 207.42.
3. BS xiv.19; iv.23; ix.15,19; xvi.2,11. Alberuni gives Dramida (1.302) cf Mbh ch.118.4.; Bhagawata iv.28,30; viii.4,7; ix.1,8; x.79,13; xi.5,39.
4. CAGI p. 628; cf Dey p. 57; JRAS 1846 p. 15; Julien iii.118.
5. BS iv.23.
6. Ibid. xvi.2.
7. Ibid. xiv.17.
8. Dey p. 190.
9. BS xiv.17; v.35,78,80; xi.57; xiii.9; xvi.16. cf Asta iv.1. 175; Bhasya i.1.1; Artha p. 455; Raghu

Kambojas[1] Pamir Badakshan region. The Mahabharata[2] locates them in the north and further states that Rajapura (modern Rajaori)[3] was the home of the Kambojas. It is now commonly believed that the Kambojas were a people of Iranian stock inhabiting the Pamir Badakshan region.[4] However, the different views expressed by various scholars are[5]: Sir Charles Eliot regards them as the Tibetans while Rhys Davids[6] locates them in the extreme North-west of India with Dvarka as its capital which has been identified with Dwarwaj.[7] V.A. Smith[8] places the Kambojas among the mountains either of Tibet or of the Hindukush and McCrindle[9] in Afganistan. H.C. Ray Chaudhuri[10] endorses the Mahabharata's view. Senart[11] allots the tribe to the tract of the river Kabul. According to Stein,[12] the eastern part of Afganistan was called Kamboja. Varahamihira's[13] location in the south west is not preferred by Fleet, who locates them far more to the north.[14] But S.K. Aiyangar reiterates that the territory of the Kambojas lay in the modern Sind and Gujrat.[15] This view has been accepted by P.N. Banerji. The Rajatarangini[16] places Kamboja in the Uttarapatha and clearly distinguishes it from the land of the Tukharas, apparently lying

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1. BS xiv.17; v.35,78,80; xi.67; xiii.9; xvi.16. cf Asta iv.1.175; Bhasya i.1.1.; Artha p.455; Raghu iv.69,70.
2. Bhism ch.9. cf Vayu ch.88; HV chs.13,14.
3. Mbh vii.4.5.
4. Panini pp.61-62; JRAS 1911 pp. 801 ff; SIHC pp. 350 ff. Bharata Bhumi pp. 297-303.
5. Hinduism and Buddhism, Vol I, p. 268.
6. Buddhist India, p. 28.
7. Motichandra, Geographical and Economic Studies in the Mahabharata, p. 19.
8. EHI 4th ed, p. 193.
9. Dey, p. 87.
10. PHAI pp. 148 ff.
11. IA vol xx pp. 239,240,247.
12. RT vol i, p. 126.
13. IA vol xxii, p. 180.
14. Ancient India, p.7.
15. Public Administration in Ancient India, p. 56.
16. iv. 163-65.

further to the north.[1] Hiuan Tsang does not speak in favour of these people.

In the Mahabharata[2] monarchical constitution was prevalent among the Kambojas. The Arthasastra of Kautilya[3] speaks of the Kambojas as a 'varta-sastr-opajivin' sangha, that is to say a confederation of agriculturists,herdsmen, traders and warriors and in Panini's[4] India, it was a Ekaraja Janapada. Kamboja kingdom[5] was one of the solasamahajanapada in the sixth century B.C.

Kiratas:[6] We know nothing about the Kirata settlement in the south west of India from the available historical records except the Sakti Sangama Tantra[7] which describes the territory of the Kiratas as extending as far as Ramaksetra and as lying on the Vindhyas, which only testifies the account of Varahamihira.[8] Buddha Prakash points out that the Kirata element predominates in the population of Ladakh and Baltistan and is also sprinkled in the people of Afghanistan. Hence a Kirata settlement in the west or north-west of India cannot be ruled out.

About the origin of the Kiratas[9] S.Levi holds that they were Mongoloids. Similiar opinion is expressed by Suniti Kumar Chatterji,[10] according to whom " the name of the Tibeto-

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1. Watters, I, 284. "From Lampa to Rajapura the inhabitants are coarse and plain in personal appearance, of rude violent dispositions ... they do not belong to India proper, but are inferior people of frontier i.e. barbarian stock." In the Bhuridatta Jataka also the Kambojas are credited with savage customs, No. 543, see also Jataka, VI, 208; Cowell's Jataka, VI.110; S. Levi,"'Pre-Aryen et Pre-Dravidien dans l'Inde", JA 1923.
2. I.67.32; II.4.32; V.165.1.3; VII.90,59.
3. p.378; Mbh VII.80.28. 4. IV.1.175.
5. Anguttara I.213; IV.252;256,260; Mahavastu I.34;II.3; Vinaya texts II, 146 ff; Niddesa, II,37.
6. BS xiv.18; xiv.30; v.35;ix.25;xi.60;xvi.2;xxxii.19,22.
7. bk iii ch.vii.29. 8. SIHC p. 264.
9. Le Nepal II pp 72-78.
10. JRASB p. 163, 1950.

Barman tribe of Kiranti living in the eastern Nepal throws some light on the ethnic basis of the word 'Kirata' [1]. As they were of nomadic habits it is quite likely [2] that they spread over different parts of India. The Mahabharata places them in the Uttarapatha along with the Yavanas, Kambojas, Gandharas and Barabaras and at another place in the north-east as the allies of the Kurus. [3] Ptolemy [4] endorses the former view of the Mahabharata. Kalidasa [5] locates them in Brahmaputra valley.

The descendants of the Kiratas still known by this name are found [6] living in the Morung, west of Sikkim. In the Chronicles of Nepal, Kirata dynasty is mentioned to have ruled after the Abhiras and the Gopalas in the Kaliyuga. The country between the Dudh-Kosi and the Arun still goes by [7] the name Kirata. In Indian literature [8] they are mentioned as non-Aryans, who lived as criminal tribes with predatory habits like those of the hunters and vultures.

Khandas [9]: The place Khanda may be identified with modern Khandva in the district of Naldrung in the Nizam's territory.

Pahlavas [10]: The Pahlavas are the same as Parthavas both being identical with the Parthians of the Indian History. They were an Iranian people established on the borders of the district

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1. HGAI p. 98.
2. xii.207,43.
3. Pargiter, JRAS p. 334, 1908.
4. pp. 192 ff.
5. Raghu iv. 76.
6. Schoff pp. 47,242,253-54, 278.
7. Le Nepal ii. pp.78-78. of JRAS p. 334, 1908.
8. Gita ii.4,18. of Barua, B.M., Ashoka and his Inscriptions, p. 100.
9. BS xiv.18.
10. Ibid. 17.

that is today Mazandaran and Khurasan.[1] The first Parthian king to rule on the soil of India was Gondopharnes (46 A.D.), had control over a vast empire including Sistan, Sind, Punjab,[2] the north western Frontier Province and Southern Afghanistan. With the passage of time the Pahlavas became Indianised. Hence the Pahlavas of Varahamihira should be identified with the Parthians naturalised in Sind near the Indus Delta who had once their capital at Minnagara. Barbaras were their immediate neighbours.

[3] [4]
Parasavas: Persians. Varahamihira refers to them as belonging to the mixed caste. This shows that there were some Persians living in the western coast of India who were being brought under influence of the Brahmanical culture and later Indianised as shown by the Smrti literature. Quite a number of Parsis (Persians) are still living in the regions even at the present times. The country is said to be the source of[5] the pearls.

[6]
Raivatakas: People living on the Raivataka hill identified with Girnar hill near Junagar in Gujarat[7] are the Raivatakas. Pargiter,[8] however, is inclined to identify it with the Barada hills at Halar.

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1. Pope and Ackerman, A Survey of Persian Art, p. 71.
2. EI vol. xviii p. 282; CII,ii pt.i p. 62. cf Marshall, Taxila, i, p.60.
3. BS xiv.18; liii.15; lxxxi.2,5.
4. Ibid. liii.15. cf Yaj i.91.
5. Ibid. lxxxi. 2,5.
6. Ibid. xiv.19. cf Adi ccxix. 7906-17.
7. CII iii p. 64 n.1; IA vi. p.239; Dey p. 165.
8. Mark p. 289.

Sindhu Sauviras[1]: The Sauviras are always connected with the Sindhus in the literature hence both of them might be living contiguously[2] in the Indus region i.e. Sind, except in the Visnu Purana[3] which separates them and ascribes them to different localities[4]. Sovira is described as a great seaport, identified with Ophir of the Bible and modern Edar. The Sindu-Sauvira territory may, therefore, be located all along the sea coast from the gulf of the Cambay to the river Indus and its northern boundary may have been Multan. It is interesting to note that the Aryans visiting the Sauvira country were required to perform a sacrifice of purification[5]. This is possibly due to the fact that every region lying outside the Madhyadesa, the citadel of the orthodox culture[6], was considered to be impure and less civilised.

Surastra[7]: It comprised modern Kathiawad and other portions of Gujarat. According to Hiuan Tsang the capital of Surastra lay at the foot of Mount Yuh-shan-ta. According to the Saktisangama Tantra[8], the country of Saurastra was extended over a hundred Yojanas on the coast from Konkana upto Hinguladja. Syrastrene of Ptolemy and Sarnostos of Strabo may be identical with Surastra[9]. The country was a great source of the pearls and diamonds during the time of Varahamihira[10]. The elephants of the country were said to be the most inferior as compared with those belonging to Anga and Kalinga[11].

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1. BS xiv.17. cf Asta iv.2.76; iv.1.168.
2. Early History of Gujarat, p. 26.
3. Bk ii ch. iii.
4. The Markandeya Purana locates them in the north (lvii.36; lviii.36), Visnupuram in the extreme west, bk ii ch.iii, p. 188. cf Kis 41.8-10.
5. BDS i.1.2.
6. Manu II. 21-24.
7. BS xiv.19; iv.22; v.79; x.6;lxix.11; lxxxi.2,4.
8. Bk iii ch. vii.13. cf Padma Puram 190.2.
9. IA 1884 p. 364. cf PHAI p. 267.
10. BS lxxxi.2,4; lxxx.6.
11. Artha p. 378.

Sudras[1]: Bahawalpur State and portions of Punjab. The Sudra tribe identical with the Sodrai (Sogdai) of the Alexander's historians were in occupation of northern Sind with contiguous portions of the Punjab (Mithan-Kotarea)[2] and Bahawalpur State, below the confluence of the Punjab rivers.

Yavanas[3]: Varahamihira speaks of the Yavanas as Mlecchas. They were regarded as the offsprings of Sudra females and Kshatriya males[4]. The Buddhist literature[5] and Panini[6] were the foremost to record the existance of the Yavana country and the Yavana people. With the invasion of Alexander their inroads became more common which led to the permanent settlement of the Yavanas on the northern borders of India. Their existence in the Mauryan times is testified by the inscriptions of Asoka[7]. After the disruption of the Mauryan empire they carved out smaller principalities, in Afghanistan, North West Frontier Province, Punjab and Sind. Their power diminished with the inroads of the Sakas and Parthians and the final blow came with the invasion of the Yue-Chis. Like other foreign hordes the Yavanas were also absorbed in Indian society gradually.

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1. BS xiv.12.
2. PHAI p. 257.
3. BS xiv.12; ii.16; iv.22; v.78,80; ix.21,35 etc.
4. GDS iv.21. cf Invasion of India by Alexander the Great, p.122, n.1.
5. Majjhima-Nikaya II. 149; Mahavastu I.171 ; Milinda Panho p.327.
6. iv.1.138.
7. Rock Edict 5,13.

SECTION VII

WESTERN DIVISION

The Brhat Saṁhita records 19 settlements in the western division[1] of India; Parasara, 27;[2] Markandeya Purana, 28[3] in the first list and 19 in the second; Brahmanda and Vayu, 19 each;[4] Matsya, 7;[5] Brahma, 4;[6] Vamana, 18;[7] Garuda, 6;[8] Kurma and Visnu, 5 each;[9] Matsyasastra, 10;[10] and the Kavya-mimamsa, 9.[11] Peculiarly enough the account of the Brhat Saṁhita neither agrees with that of Parasara, except in the case of Kaurarpana;[12] nor is it in conformity with that of the Markandeya Purana.[13] Similar is the case with the other accounts mentioned above which do not either agree between themselves. The list of the Vamana Purana is full of discrepancies, the main being the distortion of names beyond recognition.

Following is the list of settlements of the western division obtaining in the accounts of Varahamihira: Manimat, Meghavat,[14] Vanamgha,[14] Kaurarpana, Astagiri, Aparantakas, Santikas, Haihayas, Prasastadri, Vokkanas, Pancanada, Ramathas, Paratas, Tarakaiti, Jrngas, Vaidyas, Kanakas, Sakas and Mlecchas.

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1. 58.34 ff.
2. 57.50 ff.
3. 49.63 ff.
4. 45.129 ff.
5. 114.50 ff.
6. 27.58 ff.
7. 13.51 ff.
8. 1.55.15 ff.
9. 1.47.40 ff.
10. 11.3.16 ff.
11. JASB 1909, p. 360.
12. 1.94.
13. 58.34 ff.

14. Meghavat, Vanamgha, and Vaidyas are not identifiable.

The settlements omitted in the list of Varahamihira but included in that of the Markandeya Purana, are, however, included in either the western or south western division of the account of Varahamihira. The account of Varahamihira is not only the most exhaustive of all but is correct also.

MOUNTAINS

Antakhiri[1] A mythological mountain 'behind which the sun sets' in the western horizon generally identified with the Satapura range.

Kururpan[2]: Kururpan[3] may be a Scythian nomenclature of one of the mountains of the Gujarat-Kathiawad region.

ISLANDS

Kanaka[4] It may be identified with the modern Kandla port. Dey's identification with Travancore is very far in the south.

Taraksiti[5]: Taraksiti or Taraksuras may be identified with the Turushkas or Turks. They are mentioned as Tu-Kiu[6] i.e., Turkut, meaning 'strong', in the Chinese literature. They were descendants of the ancient Hiung-nu race and had wolf as their totem, and were living towards the beginning of the sixth century in the region of Altai mountains as subjects of the Juan-Juans. Bumin was the first independent sovereign of the Turks, who, with the help of the Turks of North China known in Chinese history as Si-wei (Toba), crushed the Juan-Juan power in 552 A.D. and brought the whole of Mongolia under his control. He took the

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1. BS xiv.20.
2. Ibid.
3. It may have been derived from Kharapallana mentioned in the Sarnath inscription of Kaniska of the year 3.
4. BS xiv.21.
5. p. 88.
6. BS xiv.21.
7. Hagchi, India and Central Asia, pp. 10 ff. of HSAI, p. 148.

Imperial title of Qaghan and established his capital at Orkhon, but he died soon after 552. After his death the empire of the Turks was divided between his son and younger brother. His son, Mu-han, succeeded to the empire of Mongolia with the Imperial title of Qaghan, whose successors are known as Eastern Turks. Bumin's younger brother Istami became the leader of the Western Turks with the title Yabghu in Zungaria comprising the valley of the Irtych, Imil, Yuldus basin, and Illi region. Yuldus was his summer capital. The western Turks annexed the territories of Sogdiana and Bactriana in 565 A.D. from the Hepthalites, and Tokharistan with its two capital, Balkha and Kunduz in 597-98. When Hiuan Tsang visited Tokharistan in 630 A.D. the country was under a tegin who was a vassal of the Turks. Varahamihira,[1] it seems, refer to the western Turks occupying Tokharistan and adjoining regions of Central Asia. The Turuska of mediaeval inscriptions however, refers to the Muhammadans of India.

CITIES

Pratishthana[2] Pratisthana - Paithan. Dey's[3] identification with Prasthala (Ferozepur, Patiala and Sirsa)[10] is not acceptable as the two names are mentioned by the same author.

COUNTRIES AND PEOPLES

Aparantaka:[4] According to the description Aparantaka seems to have been located south of the Sindhu Sauvira country. The

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1. KI xviii.112.
2. BS xiv. 20.
3. Dey p. 159.
4. BS xiv.20; v.71. Also in Bhisma ix.355; Vana ccxvii.7885-86; Ragha iv. 53-54.

commentator Vallabhadeva equates Aparanta with Konkana.[1] This agrees exactly with the view of Bhattaswami, commentator of Kautilya's Arthasastra who includes Surparaka modern Sopara in the Thana District.[2] R.G. Bhandarkar points out that Aparanta was the northern Konkon whose capital was Surparaka.[3] Fleet includes Konkon Kathiawad, Kutch and even Sind in Aparanta. Broadly speaking the boundary of Aparanta extended from the river Mahi to Goa.[4]

Haihayas:[5] Narmada and Chambal valley including Khandesh, parts of Aurangabad and south Malwa.[6] It is the same as Anupadesa. The Puranas[7] give five branches of the Haihayas viz., Vitihotras, Bhojas, Avantis, Kundikeras or Tundikeras and the Talajanghas. According to the Ramayana[8] its capital was Mahismati.[9] The first dynasty of Mahismati is designated as Haihaya. The Haihayas were a Ksatriya race belonging to the great family Yadu[10] who are said to have been overpowered by Mahapadma Nanda. The Kalachuris of Central India were Haihayas.[11]

Jrngas:[12] Jarak is a little town situated on an eminence overhanging the western bank of the Indus, about midway between Hyderabad and Thatha,[13] which seems to have retained its association with the Jrngas.

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1. Bk II Kosadhyaksa.
2. History of Deccan p. 9.
3. IA xxii. 173; JRAS 1910 p. 427.
4. Bombay Gazetteer vol 1 pt 1 p. 36 n.8.
5. BS xiv.20.
6. Mbh Vana ch. 114. cf Dey p. 73.
7. Matsya 43.48-49. cf PHAI pp. 145-46; SI ,p.35 fn.4.
8. Uttarak ch. 36.
9. Vayu. 94.5-26; Matsya 43.48-49.
10. CHI vol 1 p. 282.
11. PHAI 4th ed. p. 141. cf Mark pp. 344-45.
12. BS xiv. 21.
13. CAGI pp. 329-30.

Mlecchas[1]: The term Mlecchа has been used in Sanskrit literature for all outsiders who were regarded as barbarians. Varahamihira refers to these Mlecchas as 'lawless' or 'without moral customs' (nirmaryadah)[2] and calls the Yavanas as Mlecchas.[3] The Sakas and the Pahlavas are also termed as Mlecchas.[4] According to the Rajatarangini[5] the Mlecchas issued forth from the valley adjoining the Himalayas.[6] Some passages in the Mahabharata indicate that the coastal regions were the favourite resort of the Mlecchas.[7] The Katha-sarita-sagara connects them with Sind. Thus it appears that the foreigners on the western borders are meant by Mlecchas. In the mediaeval period[8] the Arabs were known as Mlecchas.

Pancanadas[9]: Region of the confluence of the five rivers of the Punjab. In the Kumarapala-carita of Jayasimha Suri (A.D. 1365) it is said that Kumarapala (1144-73 A.D.) the king of Anahila-pataka after defeating the king of Kaccha marched against Pancandadhipa, who is described as 'Nausadhana-Samaddhata'. After vanquishing the king of Pancanada, he proceeded against Mulasthana, i.e. Multan.[10] It should not be taken to mean the whole of Punjab.[11] The Mahabharata[12] associates it with the Sindhus and Sauviras.

Paratas[13]: The Mahabharata[14] mentions them as barbarous people

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1. BS xiv.21; v.79; ix.13; xvi.11,35; xvii.14,16,20.
2. Ibid. xiv.21.
3. Ibid. ii.14.
4. Visnu vol iii pp. 294 ff.
5. ii bk viii vs 2726-64 p. 217. cf HV 11.57.20.
6. ii. 32.16; 34.10.
7. i. p. 151.
8. AI vol i p. 302.
9. BS xiv.21.
10. Dynastic History of North India, ii p. 986.
11. cf Dey pp. 145-46.
12. vi.20.10; ii.32.10.
13. BS xiv. 21.
14. ii. 49.8-9; 50.2-4,12.

and Mamm as degraded people. According to the Matsya Purana[1] their home lay in the Oxus valley. D.C. Sircar[2] identifies the Paradas with the Parthians and locates them in the Khorasan region and Oppert[3] in north Baluchistan.

Ramathas[4]: According to the Amarakosa, Ramatha and Vahlika are synonymous for hengu. Therefore the region where it was produced must have been known as Ramatha or Vahlika i.e., Bactria of the Greeks and modern Balkh.

Sakas[5]: Under the name 'Scythian' were included various tribes of Indo-European origin, who spoke either Iranian or other Indo-European dialects, occupying the region from south Russia upto the valley of Ienessi.[6] The Scythians known as Sakas in Indian literature entered India after having been driven out by the Ta-Yueches, sometimes in the first century before Christ. Varahamihira was himself a Saka, belonging to the class of the Maga Brahmanas. They seem to be the descendants of the Śaka satraps ruling in the regions of Gujarat and Kathiawad from the time of Bhumaka, Nahapan and Rudradaman. They were conquered by Candragupta II sometime in the beginning of the fifth century A.D. The Sakas of Varahamihira have nothing to do with Sakasthana or Sistan i.e.

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1. ch. 121. 45-46.
2. IHQ xxi. 303 fn. Others connect them with the Palidas or Parindas of the Asokan inscriptions, see CII vol 1, p. 25; PHAI p. 269.
3. On the original Inhabitants of Bharatavarsa or India, p. 35.
4. BS xiv. 21; x.5; xvi.21. cf Utpala pp. 232-91.
5. Ibid. 21.
6. Bagchi, P.C., India and Central Asia, p. 1.

Drangiana. Sind was also known as Indo-scythia.

Santikas:[1] The residents of Sanchi.[2]

Vokhanas:[3] The modern Wakhan in the north west Frontier Provinces of Pakistan represents the ancient region of the people of the Vokhanas. Varahamihira is a bit to the south. The Chinese pilgrim Sung Yun visited this place in the early sixth century A.D. and calls it by the name of Po-Ho.

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1. BS xiv. 20.
2. Dey p. 178. Cunningham, Bhilsa Topes, pp. 181 ff.
3. BS xiv. 20.

SECTION VIII

NORTH WESTERN DIVISION

Varahamihira's account of the north western division of India is the most important source of information on the subject, the only other sources worth mentioning being the text of Parasara and the Markandeya Purana. The Brhat Samhita furnishes us with a list of 21 names; Parasara, 22[2]; Markandeya Purana, 14 in one list and 22 in the other list[3]; and Garuda Purana, 7.[1] The north western division of India is not noticed in other Puranas such as the Vayu, Brahmanda, Vamana, Kurma, Visnu, etc. The list of Varahamihira includes the following names: Mandavyas, Tusaras, Talas, Halas, Madras, Asmakas, Kulutas, Laharas, Strirajya, Nrsimhavana, Khasthas, Venumati, Phalgulula, Guruha, Marukmccha, Carmarangas, Ekavilocana, Sulikas; Dirghagrivas, Dirghasya, and Dirghakesas.

The Parasara's account of the division does not contain the names of Asmakas, Kulutas, Carmarangas of the list of Varahamihira but has the Girimati,

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1. 58.36 ff.
2. 57.35 ff.
3. 55.16 ff.

Balamāti, Bardilina, Vilina and Visavesa; which are not included in the said list. Whereas the Markandeya Purana[1] does not mention the aforesaid four names of the list of Parasara, as well as that of Tusara, Talas, Guruha, Ekavilocana, Dirghagriva, Dirghasya and Dirghakesa of the Brhat Samhita, it includes the name of Urukurma not found in both the above lists. Thus there are considerable variations in the list of Parasara and the Markandeya Purana, but both of them support in their own way the whole list of the Brhat Samhita. The second list of the Markandeya Purana[2] does not, however, have any name of the list supplied by the Brhat Samhita with the sole exception of the name Carmakhandikar, possibly a variant of Carmarangas. It enlists the names which should actually be located in the northern division.

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1. 58.35 ff.
2. 57.35 ff.

RIVERS

Garuha:[1] Dr. Kirfel[2] reads the name as Galuha, but it is better to read it as Guruha or Garuha as Fleet does.[3] This may be identified with the Greek name Gouraioi (Gouraians or Guraeans). The country and the river may owe their names to the Gauri or Ghori, a great and wide spread tribe, branches of which are still to be found to the west of Landai and on both sides of the Kabul river.[4] The river Gouraios of Arrian[5] was the same as the Panjkhora or the Landai, formed by the junction of the rivers Panjkhora and Swat, to the west of which lived the Gourains. The country of the Gauras or the Guraeans which lay between the land of the Aspasians and the country of the Assakenians i.e. between Alishang-Kunar-Bajaur valley and part of Swat and Buner regions, was watered by the river Guraeus,[6] Gauri or Panjkhora.[7] The region named Goruaia formed a part of the empire of the famous Indo-Greek king Menander or Milinda of the Milinda Panho.[7a] The names adopted by various authorities as mentioned above may refer to the name of one and the same region or people or river represented by 'Garuha' of Varahamihira. The

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1. BS xiv.2 3. Galuha is another variant.
2. DKDI p. 88.
3. IA xxii p. 171.
4. Invasion of India, p. 66, fn.1; McC Ptol p. 111. Gaurigurusaila is mentioned by Kalidasa (Raghu iv.71).
5. Ptolemy also refers to a region named Goruaia and a town called Gorya Lassen Altert iii pp. 127,136.
6. Invasion of India, p. 66; McC Ptol p. 111; PHAI p. 245.
7. McC Meg p. 198 fn; Invasion of India p. 66 fn.1; Dey p. 63.
7a. GBI p. 226.

region may be identified with the modern wooded hills of Bajaur and the rough and rocky tract of Mohamand between the rivers Landai and Kunar (Kampana, Malautos and Euaspalm) bounded by the Kabul river on the south.

Phalgulaka[1]: Fleet takes it to be a river, while Utpala seems to regard it as the name of a people apparently living on the banks of the river of the same name, who may be identified with the Phegelas of the Greek writers who lived somewhere between the Hydraotes and the Hyphasis[2] in the Punjab. In our opinion, however, there existed a river or a tributary of this name which has gone dry in the course of time. Its remnants are still found in its variant 'Nala-Palkhu' which flows during the rainy season in parts of Sialkot and Gujranwala districts of West Pakistan. There is one Phalgu river which joins the Ganges[3] in the district of Monghyr, north east of Lakhisarai[4]. The united stream of the Nilajana and the Mohana is also called by the name of Phalgu which flows through Gaya[5]. These identifications are contrary to the location of Varahamihira who places it in the north west and cannot be entertained for obvious reasons.

Yamunaki[6]: Alberuni[7] identifies it with Tirmidh.

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1. BS xiv.23.
2. IA xxii, p. 190.
3. Invasion of India, p. 281. cf HGAI pp. 32,251; Dey p. 156.
4. HGAI pp. 32, 251.
5. Dey p. 156.
6. BS xiv. 23.
7. I p. 302.

FORESTS

Nrsimhavana:[1] A forest of Pilu trees lying near Narasimha to the east of Sakala (modern Sialkot) in the Cheh-Ka (Takka) i.e. Punjab country, as recorded by the Chinese traveller, Hiuan Tsang,[2] where he had an encounter with brigands and narrowly escaped with his life. This may be a variant of Nrsimha which has been identified by Cunningham[3] with a large ruined mound of Ran-si about 25 miles to the west of Lahore. In all probabilities, it can be located somewhere between Lahore and Sakala, the present Sialkot in the West Pakistan, in view of the pattern and richness of crops viz. rice and wheat as per the account of Hiuan Tsang,[4] which obtain in the region till the /times. / present

KINGDOMS

Stri-rajya:[5] Vatsyayana[6] groups Stri-rajya literally meaning a kingdom ruled by women, with the Vahlikas. The Rajatarangini[7] confirms this view and states that it was lying in the extreme north-west of India. This agrees with the description of Varahamihira. The account of Varahamihira can further be supplemented by the account of Hiuan Tsang,[8]

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1. BS xiv.22; JRAS 1871 p. 85, fn.4. According to Alberuni, Nrsimhavana means the people with lion faces (AI i. p.302).
2. Watters i. p. 186.
3. CAGI pp. 221-22.
4. "The crops of the country were upland rice and spring wheat.... ". Watters i. p. 186.
5. BS xiv. 22; xvi.6.
6. p. 385 (ed. Pancanan).
7. RT iv. vs.173,185,587,666. cf ABORI vii, 144 ff.
8. Watters ii. pp. 257-58.

who mentions an amazonian kingdom, Lang-Kie-Lo in the western Himalayan region known as West-Woman-Country, which lay somewhere in the western border land of India and Persia and possibly west of Multan, which has been identified with a portion of Baluchistan and Mekran. He further tells us that it had no supreme government, each valley having a separate government of its own, but it was subject to Persia. Its writing was very like that of India, but the spoken language differed a little. Besides over 100 monasteries and more than 6000 Brethren professing both the Great and Little Vehicles, there were also 'some hundreds of Deva temples', mostly belonging to the Pasupatas. It is evident that it had a very peculiar political set-up in which the petty hill states of the kingdom enjoyed a lot of autonomy.[1] Dey, however, identifies it with Garhwal and Kumaon, which is untenable. As a passing reference it may be pointed out that the Mu-wang tribe in Eastern Tibet was ruled over by a woman named Pin-Chin.[2]

COUNTRIES AND PEOPLES

Asmaka:[3] The terms Asmaka, Asvaka and Assaka are often confused. Asmaka is translated as the land of stones and Asvaka as the land of horses and Assaka is a variant of Asmaka. Assaka of the Pali literature[4] is generally supposed to be identical with Asmaka. On the other hand the term Assaka

1. Dey p. 194.
2. Ibid.
3. BS xiv.22; v.30,73-74; ix.12,27; xi.54-55; xvi.11; xvii.15; Asta.iv.1.173.
4. Anguttara 1.213; iv.252,256,260; Mahavastu ii.2.

is identical with that of Asvaka. The Greek Assakenos were also known as Asvakas, 'belonging to the land of horses' possibly because of possessing a very powerful army of 20,000 cavalary[1] and the Greek Assakenos were the same as Assakas of the Pali literature. Hence the relationship between the Asvaka and the Assaka. As a corollary to the above the Asmaka may represent the Asvaka and vice-versa. Thus, all the three names Asmaka, Asvaka and Assaka may belong to the same ethnic group.

The Assaka-Mahajanapada of the Buddhist literature, the same as the kingdom of Asmaka, was situated on the banks of Godavari.[2] According to the Mahagovinda Suttanta of the Digha Nikaya,[3] Assaka with its capital Potana, was one of the seven important metropolis cities of India, identified with modern Paithan (Sanskrit Pratisthana)[4] in Aurangabad district, on the north bank of the Godavari.

There are but a few direct sources which confirm the situation of Asmakas in the north western division. The Asmakas are mentioned in the Padma Purana[5] and the Mahabharata[6] as a northern tribe, although the reading varies with Asvaka in some recensions of the Mahabharata.[7] And the identification of Asmaka with Asvaka as already explained, can hardly be

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1. Invasion of India, p. 378.
2. Sutta Nipata, vs.976-77; SBE x.184. Such a conclusion can also be drawn from Panini's reference to Asmakas when considered along with his use of expressions like Daksinatya (iv.2.98) and Kalinga (iv.1.173).
3. ii p. 235; SBE iii p. 270.
4. cf Kathasaritasagara i p. 232; ii pp. 32-33; Skanda Purana ii.7.14.34.
5. Svarga 3.40. 6. TAI p. 180. 7. EKDI p. 77.

called into question.

The kingdom of Asvaka or Greek Assakenos included the part of Swat and Buner regions during the time of Alexander, which stretched eastwards as far as the Indus and had its capital at Massaga, a "formidable fortress probably situated not very far to the north of the Malakand Pass but not yet precisely identified.[1] Assanga in his Sutralankara identifies Assaka with Sanskrit Asmaka or Asvaka and locates the country in the basin of the Indus.[2] It is quite plausible to suggest that the Assakenos,or Asvakas, or Asmakas originally had a settlement in the north west of India and in course of time one of their branches had entered India and settled down first in the north west of Avanti[3] and later shifted to the banks of Godavari, where they were known as Assakas of Pali literature.

Carmaranga[4]: Possibly totemistic tribe of uncertain identify.

Dirghakriva[5]: It may be identified with Deog in the Bharatpur District of Rajasthan.[6] The people inhabiting the area were having long neck and supposed to be very strong, hefty, and long statured as the name suggests.

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1. PHAI p. 245.
2. HCAI p. 51.
3. According to Rhys Davids (BI pp. 27-28), Asmaka was situated immediately north west of Avanti and the settlement on the Godavari was a later colony.
4. BS xiv,23.
5. Ibid.
6. Dey p. 57.

[1] **Dirghakesas**: The name is suggestive of the people having long hair. It is difficult to ascertain their identity or locate the area where such people lived. The name at the face of it, is ambiguous and can hardly be identified.

[2] **Dirghasyas**: It denotes the people having long faces. Like the Dirghakesas, it is very difficult to establish their identity or locate the area where they lived. This term is also ambiguous and as such cannot be identified.

[3] **Ekavilocanas**: Another ambiguous term denoting one-eyed people supposed to be living during the time of Varahamihira. The name can hardly be identified.

[4] **Halas**: The Halas, most probably were the people of the Hala mountains identified with Salvaka-giri of the Ganapatha of Panini situated in the lower Indus valley, that run between Baluchistan and Sind.

[5] **Khasikhasi**: The Khasthas may be identified with the Khasas inhabiting the region, comprising the valleys lying immediately to the south and west of the Pir Pantsal range, between the middle course of the Vitasta in the west and Kishtawar in the east.

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1. BS xiv. 23.
2. Ibid.
3. Ibid.
4. BS xiv.22; xvi.6; xxxii.19. Fleet reads Lahas (IA vol xxii, p. 171). Alberuni combines Tala and Hala as Talahala (vol i p. 302).
5. IHQ xxix.6,19.
6. BS xiv.22.
7. KT i p.47 fn. cf Day p. 99.

The whole of the valley leading from Banihal to Candrabhaga, which is now called 'Michlari' and which in the Chronicle[1] bears the name of Visalata, was inhabited by the Khasas. The Khasas are further identical with the modern Khakha tribe, to which most of the petty hill-chiefs and gentry in the Vitasta valley below Kashmir belong.[2] According to Alberuni Khastha is a mythical name. This view is obviously not tenable.

Kulutasi:[3] It is Kulu in the Kangra district of Himachal Pradesh. For details see under north east division.

Laharas:[4] In the Markandeya Purana there is a reference to Kunyataladahas which is deciphered by Pargiter as one word[5] and followed as such by Kirfel.[6] The reading of the Brhat Samhita, however, clearly indicates Kulutas and Laharas as two separate names corresponding to Kunya-tsladahas or Kunyata and Ladahas as mentioned in the Markandeya Purana, Alberuni also reads Kulutaladahada.Other variants of Lahada or Ladaha such as Lahara and Lohara may be found in the Rajatarangini.[7] Lahara is identified with the modern Lar district which comprises the valleys drained by the Indus and its tributaries as well as the alluvial

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1. RT viii.177.1074.
2. Ibid. i p. 48 fn. cf AGI p. 131.
3. BS xiv.22.
4. BS xiv.22. Variants are: Lahada, Ladhha, Halada and Kalaha. cf RT i bk viii.140 p. 278.
5. Mark p. 375.
6. EKDI p. 87. cf. JRAS 1871 p. 85 fn 3; McC Ptol p. 126; Abul Fazl AIA ii p. 312.
7. RT v. 51. cf Ibid. vii. 911, 1360 ff; viii. 437, 729, 793, 1128 ff.

tract on the right bank of that river after its entry into the Kashmir plain. The routes to Ladakh and Central Asia passed through this region which made it all the more important.

The Lohara is to be located in the mountainous region which has been authentically fixed in the valley now called Loharin, belonging to the territory of Prunts (Parnotsa) by M.A. Stein.[1] Lohara is famous as an ancestral home of Kasmirian kings.[2] Wilson's identification of Lohara with Lahore is hardly sustainable in face of the Kalhana's account in the Rajatarangini which speaks of Lohara[3] as a hill-fortress situated in close proximity of Kashmir.[4] Ladaha has also close similarity with Ladakh. The Lahadas of Varahamihira may be identified either with Lahara or Lohara.

Madras:[5] The Madras lived in the Central Punjab, in the Doab between the Chenab and the Ravi and had Sakala or modern Sialkot (in the West Pakistan now) as their capital. The Madrakas or the people of the Madra country claimed descent from an eponymous king Madraka, son of Sibi Ausinara, and were septs of the family of Sivi like the Kaikeyas.[6] According to Przyluski,[7] they entered India

1. RT II p. 293.
2. Ibid. vii. 140 (1 p. 278).
3. Essay on the Hindu History of Cashmir, p. 47.
4. cf RT vii. 140,703,862,960;RK viii. 203, 379, 567, 700, 1227, 1620, 1794 ff, 1878 ff, 1996 ff etc.
5. BS xiv. 22. cf Sat.Br. iii.7.1.
6. AIHT p. 264.
7. JA p. 18. cf EHI p. 302.

shortly before the Achaemenid period. They had, however, some non-Indian customs among them, on account of which they are sometimes classed among the barbarians in Indian literature.

From the Milinda-Panho we learn that king Milinda (Menander) an Indo-Greek King, who became a convert to Buddhism, was ruling over the Madda i.e. Madra country with Sagala i.e. Sakala[2] as his capital.[3] According to the Allahabad Pillar Inscription of Samudragupta, the Madra country was a republican state on the north western frontier of the Gupta empire. In the early part of the sixth century A.D. it passed under the rule of the Huna conqueror Mihirakula, who ruled the area from Sialkot. The people continued to flourish as one of the powers of the Punjab, even up to the time of the Pala King Dharmapal of Bengal in the 9th century A.D., who are said to have owed allegiance to the Bengal King.

Mandavyas[4]: The Mandavyas may be identified with the people of Mandi[5] lying at the junction of the vallys of Loharin and Gagri in the southern slopes of the Pir Pantsal range in Kashmir. It has, however, been argued that the Mandavyas is a misnomer for Murundas[6] who, according to

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1. SBE xxxv.6.
2. Panini refers to it as Sankala (iv.2.75.)
3. CII iii pp. 1 ff.
4. BS xiv.22.
5. RT ii p. 296.
6. HSAI p. 138 fn.

Hemacandra, lived in Lampaka or modern Laghman in Afghanistan and as mentioned in the Allahabad pillar inscription, entered in some sort of alliance with Samudragupta. Since the Mandavyas are mentioned by Varahamihira along with the Khasthas or Khasas which is suggestive of their close proximity with the Khasas which can hardly be ruled out by this suggestion. Hence their settlement in the region of Kashmir may be justified.

Marukaccha:[1] According to Kern[2] Marukaccha were a people in the modern Kaferistan or thereabouts. If we split the two into Maru and Kaccha, Maru will denote the desert country and Kaccha will be equivalent to the Great Rann of Kaccha or Kaccha-Irina.[3] Thus the combined name will comprise Cutch and Sind Parkar regions[4] lying very far to the south. As such Maru and Kaccha cannot be located in the north west sector.

The word Bharuka occuring in the reading Bharukaccha, a variant of Marukaccha, is identical with Po-lu-kia which is identified with the modern Aksu region in Central Asia. Kaccha may be identified with Kuci (Kui-che), a variant of modern Kuca. If we accept the reading of Bharukaccha as identical to Marukaccha, the country may be identified with the regions of Aksu and Kuca lying on the

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1. BS xiv. 23. The variants are: Murukaccha, Marukaccha, Muruku, Maruhatarukaca, Bharukaccha, Nuruka, Marukastha, Purukutsa, Gurukutsa and Paramaccha. Utpala and Parasara give Marukaccha which is adopted by Kern in his text and Fleet also (IA xxii p. 135). cf Utpala Commentary, pp. 291-92.
2. JRAS 1870 p. 463 fn.2.
3. IHQ xxix. 16-17.
4. CAGI p. 347.

northern route of the Tarim basin. The people of Kuci spoke the Kuchean[1] or Kusana language, which is akin to the Tokharian language. Kucha was a great centre of Buddhism. The annals of the Tsin dynasty (265-316 A.D.) tell us that in this period there were nearly one thousand Buddhist stupas and temples in Kucha.[2] Kumarajiva, the most outstanding scholar of Kucha, who received his early education in Kashmir under Bandudatta, was responsible for introducing Mahayana in the countries of the Tarim basin and also in China.

Sulikas:[3] Saulikas:[4] Varahamihira mentions the Sulikas in the north west as well as in the south east sectors. Sulika has been identified with Sogdiana[5] situated to the north of Tokharistan with its centre at Samarcand. The Sogdians are mentioned in the Achaemenian records as Suguda (Behustun inscription), in the Avesta[6] as Sughda, and by Herodotus under the name of Sogdoi. The Sulikas are known from various texts. They are known as Culika in the Mahabharata; Culika, Culika, Cudika, Sulika, Sulika, in the Puranas; Sulik in Tibetan; Su-li in Chinese; Suri or Suli in Sino-Sanskrit; Surak in Pehlvi, etc.[7] It is quite possible that the Sogdian name Sulik, Sulik could be transcribed as

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1. Bagchi, P.C., India and Central Asia, p. 68.
2. Ibid. pp. 79-80.
3. BS xiv. 23. of Caraka, 30.6.
4. Ibid. xiv.3. of JRAS 1912 p. 128.
5. Gauthiot, R., Essai de Grammaire Sogdienne, p.vi.
6. Bagchi, P.C., India and Central Asia, p. 26.
7. For details see Gauthiot, R., op-cit.; JA 1910, 11, pp. 541-42; of Kirfel, Die Kosmographie der Inder, p.73.

Sulika - Sulika and sometimes as Culika - Culika. In the Mahabharata[1] the Culikas are mentioned along with the Tusaras, Yavanas and Sakas as occupying the right flank of the army in the great war.[2] According to the Matsya Purana they were founders of some sort of kingdom in India in the dark times of the Kali age.[3] Reference in the Vayu Purana reads as Tulikas instead. The Markandeya Purana locates the Culikas or Culikas along with the Lampakas, Kiratas, Kasmiras etc. in the region bordering India on the north[4] and also along with the Aparantikas, Haihayas etc. in the west of India.[5]

The Saulikas of the south east sector can be corroborated by the Haraha inscription[6] of Isanavarman, the first Maukhari king to assume the Imperial title of Maharaja-dhiraja, who claims victories over the Andhras, the Sulikas and the Gaudas. Since the Sulikas are mentioned between the Andhras and the Gaudas, their settlement in Orissa cannot be ruled out.

The Sogdians are known as good agriculturists and excellent merchants. A large part of the trade between China and the western countries including India was in the hands of the Sogdians. Politically they did not seem to have played any great role even in their own country. The

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1. vi.75.3287.
2. 50.76. cf Ibid. 114.43.
3. 99.358.
4. Mark 57.40.
5. Ibid. 58.41.
6. EI xiv. p. 116 verse 12. cf HHI pp. 222-23; JAHRS i pp. 130-31.

Sogdian monks had played some part in the transmission of Buddhist culture to China. Their names are distinguished in Chinese by the prefix Kang, the ancient name of Sogdiana in Chinese being Kang-Kiu.[1] It is not improbable that the Sogdians entered into India as merchants and settled down in the Punjab by the side of the Sakas and Yueches and later following their far flung commercial contacts penetrated deeply into Indian population and culture.

The remnants of the Sogdians may be found in the Sulki Rajputs of the Shahpur district; Solgi and Solkah Jats of Multan in West Pakistan; the Sud, Suda or Sudgi of Amritsar, Macchivara[2] and Ludhiana in the Punjab; the Solankis of Gujarat[3]; and the Calukyas of the Deccan[4] in ancient times.

Talagi[5] The name denotes inhabitants of Talapura or Talapura[6] in the neighbourhood of Nirmand. The settlement is a village (Lat. 31° 26' N ; Long. 77° 38' E),near the right bank of the Sutlej, twenty-one miles north-east of the town of Plach in the Kulu sub-division of the Kangra District in Himachal Pradesh.

The Talas can also be connected with the city of Ta-le-sse restored as Talas (situated near the present Aulie-ata) which was visited by Hiuen Tsang[7] while journeying through Turkistan. Talastan is a mountain-girt country and

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1. Bagchi, P.C., India and Central Asia, p. 39.
2. A Glossary of the Tribes and Castes of the Punjab, 1919, vol iii, pp. 428 ff.
3. Ibid. i p. 47.
4. PHAI pp. 602-3, fn.5. cf Fleet, Dynasties of the Kanarese Districts, p. 339; Bhandarkar, R.G., History of Deccan, p. 120.
5. BS xiv. 22.
6. Nirmand Copper-Plate inscription of the Mahasamanta and Maharaja Samudrasena, CII iii pp. 286-291.

contd. next page

is watered by the various tributaries of Syr Darya. In ancient times it was frequented by merchants coming from all parts. The natives are mostly Tartars. There is, however, another possibility of this place being identified with the Tangatala Pass, which is about five miles/the north of the / to Pir Pantsal Pass.[1]

Tokharistan: Tokharistan: The country known as Tokharistan is mentioned as Ta-hia in the early Chinese records of the Han period and T'u-ho-lo (T'u-xuo-la), i.e. Tukhara after the fourth century A.D. Pliny mentions its people as Tochari, Ptolemy as Thagouroi and Periegetes. The later Greek and Latin writers refers to it as Tocharoi. The Tibetans knew them as Thogar or Thodgar and Uigurs as Toxri and their country as Tuxsetn, i.e. Tokharistan.[3]

The earliest people inhabiting the land of Tokharistan, were the Sakas, whom the Chinese call Sai (Sek). Herodotus also refers to them. The southern limits of Tokharistan were snatched away by the Greeks in the middle of the third century B.C. In C.160 B.C. the Ta-Yueches, who were driven away from their original home in outer Mongolia by the Hiung-nus, occupied Ta-hia and pushed out the Sakas southwards who entered Kipin (Kashmir) by the Bolor route. The Kushans, one of the five 'hi-hous' i.e. Yabghus of the Yueches, overpowered the

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contd. From pre-page.

7. Watters, i, p. 82; See also Schuyler, E., Turkestan, 1876 vol. I, p. 200.

1. MT ii p. 306.
2. BS xiv.22; xvi.6.
3. Bagchi, P.C., India and Central Asia, p. 20.

other four 'hi-hous', after about a century and ruled till the middle of the fifth century A.D. After the Kushans, Tokharistan passed into the hands of the Hepthalites, who gave place to the Western Turks.[1]

In the time of Hiuan Tsang, the country of Tokharistan had fairly large territory. It was bounded by Badakshan in the north, Hindukush in the south, Persia in the west and Pamirs in the east. The river Oxus flowed through it. In the Mohamedan period, however, Tokharistan came to mean the territories between Badakshan and Balkh. As Hiuan Tsang tells us, /whole of Tokharistan and the /the adjoining states in the Hindukush and Pamir regions had the same writing and literary language up to the middle of the seventh century. The writing was horizontal, read from left to right,[2] and had 25 radical letters and probably a few more derivatives. The language of the Tukharas, which was known as Toxri in the Uigur texts, might have been[3] adopted from Brahmi script, is the view held by P.C. Bagchi. The influence of the old Persian over Toxri is also plausible.

It was a great centre of Buddhist culture and learning. Hiuan Tsang gives a vivid description of the Buddhist establishments of Balkha. The largest monastery[4] was that of the Navasangharama. Other interesting sites

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1. Watters i, p. 102.
2. Ibid., p. 103.
3. India and Central Asia, pp. 28 ff.
4. Hiuan Tsang states ' within the convent in the southern hall of the Buddha, there is the washing-basin about a Tou in capacity. So bright and dazzling was the blending of colours in this basin that one could not tell whether it was of stone or metal. There was also a tooth of the Buddha an inch long and 8/10ths of an inch broad and there was his broom made of Kusa grass above two feet long and about seven inches round, the handle being set with pearls' (Watters, i. pp.102-3).

where we find remains of Buddhist art are Bamiyan, Haibek, Termez and Kunduz.

The land of the Tukharas or Tusaras, Tokharistan, is the most important country in Central Asia. 'It was the melting pot of various nomadic civilisations that passed from north to the south and from the east to the west at different times during the historical period. It was also the land where the nomads had their first training in modes of settled life before they moved on to other lands! [1] It was also the people of this land who carried the Indian culture to the north and east and transmitted the cultures of Iran, Greece and the nomads to India.

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1. BAGCHI, P.C., INDIA AND CENTRAL ASIA, p. 19 .

SECTION IX

NORTHERN DIVISION

Varahamihira records the 50 ethnic groups[1] in the northern division; Parasara, 54; Brahmanda[2] and Vayu Puranas, 49 each; Matsya,[3] 30; Markandeya,[4] 47; Brahma,[5] 46; Vamana,[6] 54; Garuda,[7] 6; Kurma[8] and Vishnu,[9] 10 each; and Kavyamimamsa,[10] 20. The accounts of the Garuda, Kurma[Vishnu Puranas are incomplete and hence serve no [and purpose of our study. The list of the Markandeya Purana seems to have been drawn exactly on the same pattern as of the Vayu Purana. It follows the same order and setting except that it omits names of Huna and Andhakataka of the Vayu list.[11] The Markandeya Purana does not include the names such as Vasatis, Abhara, Pauravas, Kaccharas and Gavyas as contained in the list of Varahamihira. Similarly the Brahma Purana seems to have followed the Vayu Purana in its entirety in the

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1. 49.49 ff.
2. 45.115 ff.
3. 114.40 ff.
4. 58.41; cf 57.35 ff.
5. 27.44 ff.
6. 13.37 ff.
7. 1.55.17 ff.
8. 1.47.43 ff.
9. 11.3.17 ff.
10. 1.94.
11. 58.41 ff. The second list of the Markandeya Purana (57.35 ff) is quite dissimilar from that of the Brhat Samhita.

matter of drawing its list. The Vāmana Purāṇa also supplies a list of 54 names, which is similar in approach and content to that of the Vāyu list. Varāhamihira includes the following names in the Northern division: Kailāsa, Himavat, Vasumat, Dhanuṣmat, Krauñca, Meru, Uttarakuruṣus, Kṣudrāmināas, Kaikeyas, Vasatis, Yamunas, Bhogaprasta, Arjunāyanas, Agnidhras, Adarśa, Antardvipa, Trigarta, Turgānāna, Śvamukhas, Dirghakeśas, Cipitanāsikas, Daśerakas, Vatadhānas, Sāradhānas, Takṣaśila, Puṣkalāvati, Kailavatas, Kāntadhānas, Ambaras, Madrakas, Malavas, Pauravas, Khaśharas, Dandapingalakas, Manahalas, Hunas, Kohalas, Sitakas, Mandavyas, Bhutapura, Gandharas, Yaśovati, Hemataläs, Rajanyas, Kṣeśaras, Gavyas, Yaudheyas, Daśameyas, Śyāmakas, and Kṣemadhurtas.[2]

The account of Varāhamihira, by and large, stands corroborated except for variant reading in certain cases, by the texts of Parāśara, and the Markandeya Purāṇa.

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1. Turgānāna, and Dirghakeśas are fabulous terms.
2. Daśerakas, Manahalas, Kṣeśaras, Śyāmakas and Kṣemadhurtas are not identifiable.

RIVERS

Yamuna[1]: See under the Central zone.

MOUNTAINS

Himavat[2]: It may be identified with one of the peaks of the Himalayan range.

Himavat[3]: The Himalayas. Varahamihira[4] speaks of the Himalayas as one of the breasts of the earth, the other being the Vindhya mountain.[5] The caves of the Himalayas infested with Camara deer are also referred to.[6] The expressions 'Antaragiri' and Bahir-antah-saila-jah,[7] denote the Central Himalayan region including the Everest, Kanchanjunga etc., and Lesser Himalaya comprising Mussurie, Nainital, Simla, Dharamsala, Srinagar[8] etc. respectively.

Kailasa[9]: The Kailasa range runs parallel to the Ladakh range, 50 miles behind the latter. It constitutes the watershed from which the Indus, Sutlej and Brahmaputra take their rise. Kailasa was supposed to be the paradise of Siva and Parvati

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1. BS xiv.25.
2. Ibid. 24.
3. Ibid.;xvi.17; xliii.36; lxxii.1; lxxx.7;lxxxi.2,5. cf Rgveda x.121; Atharva xii.1,11; Asta iv.1.49; Raghu iv.79; Mark ch. liv; Mbh Vana ch. 253; Bhagavata 1.13,29,50.
4. BS xliii.36.
5. Ibid. lxxii.1.
6. Ibid. v. 42.
7. Ibid. xvi.2.
8. Panini pp. 43-44.
9. BS xiv.24. cf Bhagavata iv.5,22; v.16,27; JASB 1838 p.314; Hunter, Indian Empire pp. 43,45; Dey, pp. 82-83.

and the fabulous residence of Kubera.[1]

Krauncha[2] Kraunca is the name of that mountain of Kailasa range on which the lake Manasarovara[3] is situated. It has been identified with the Niti Pass.[4]

Meru[5] It is the modern Rudra Himalaya in Garhwal where the river Ganges takes its rise.[6] Meru is known as the Olympus of Hindu mythology and the abode of god Indra.

Vasumati[7] Vasumat means 'full of wealth'. It denotes the Himalayas in general.

CITIES

Bhogavardhana[8] Baghpat near Delhi.

Bhutapura[9] A town of the Bhotas. The Tibetan name of Tibet is 'Bod' or Bod which seems to have been corrupted into Indian form Bhot, giving rise to the name Bhotiya or Bhuta, applied to the border tribes living between India and Tibet. According to Stein the Bhauttas of the Rajatarangini refer to the population of Tibetan descent, generally inhabiting the regions immediately to the east and north-east of Kashmir i.e., the modern mountain districts of Dras, Ladakh and perhaps also Skardo.[10]

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1. Raghu ii.30; iv.80; v.28; Kumar vii.30; viii.24.
2. BS xiv.24.
3. Dey, p. 104.
4. Upadhyaya p. 7.
5. BS xiv.24; xxvii.7.
6. Mbh Santi chs. 336-36. cf HGAI p. 111; GMB p. 42.
7. BS xiv. 24.
8. Ibid. 26.
9. Ibid. 27. cf PHAI p. 38.
10. RT p. 47 fn.

Puṣkalavatī[1]: Puṣkalāvatakā[2] Puṣkalavata or Puṣkaravati which represents the Latin Penkolaotis is identified with Mīr Ziyarat and Charsadda about 17 miles north east of Peshawar, on the Swat river. It was the capital of the ancient kingdom of Gandhara.

Takṣaśila[3]: Takṣaśilā[4] Taxila. The kingdom of Taxila formed the eastern part of the old kingdom of Gandhara.[5] It is in the modern Rawalpindi District. The excavations carried on at Taxila by Sir John Marshall[6] have unearthed three settlements-Bhirmound, Sirkap and Sirsukh belonging to different periods. It served as a capital city of important empires of the Greeks, Scythians, Parthians and the Yueches. In the Mauryan period it was the site of an important University where Kautilya, the Prime Minister of Candragupta Maurya, received and imparted education. It was particularly known among other subjects for the medical and military training. It was also a mint city. But it is best known for its art relics in the field of sculpture known as the Gandhara School of Art, which was one of the most prolific schools of early Indian art, active from about the middle of the first century B.C. to about the fifth century A.D.

Vāsāti[7]: The Vasati may be identified with the Ossadioi[8] of Alexander's historians who occupied parts of the territory

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1. BS xiv.26.
2. Ibid. xvi.26.
3. Ibid. xiv.26; xvi.26.
4. Ibid. x.8. cf AI ii p.8.
5. PHAI p. 247.
6. Taxila vols.
7. BS xiv.25; xvii.19.
8. PHAI p. 257.

drained by the lower Akesines (Chenab) and situated between the confluence of that river with the Ravi and the Indus respectively.[1]

Yasovati:[2] Yasovati is the name of Helmand which is equivalent to Sarasvati.

COUNTRIES AND PEOPLES

Ambarali:[3] Central Punjab. Utpala renders it as Ambaravata denoting the people of the city of Ambaravati. They may be identified with the Ambri people who along with the help of their neighbours Sigambri opposed Alexander.[4]

Antardvipai:[5] Antardvipa means the Doab i.e. the land between the confluence of two rivers. Some of the important Doabs are: Bist-Jullundur i.e., land between the Beas and Sutlej; Rechna Doab i.e., the region between the Ravi and Chenab; and the Doab between the Ganges and the Yamuna. Still another is Ganga or Yamuna and Chambal doab.

Adarsa:[6] It is the place where the river Sarasvati disappears into sand.[7] It is in the Hissar district of the Haryana.

Agnidhras:[8] The Agnidhras were the official priests of the Agni cult.[9] The Agnihotras of the Punjab and Haryana may be descendants of the Agnidhras.

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1. PHAI p.257. cf Invasion of India p.156 n; Dey, p.26.
2. BS xiv.28. cf Vedic Index ii p. 437; CAGI pp. 46 ff.
3. Ibid. 27.
4. Invasion of India p. 324; cf Dey, pp.5-6.
5. BS xiv. 25.
6. Ibid.
7. Mbh ix.37.1.
8. BS xiv.25.
9. Benfey, Sanskrit English Dictionary, p. 71.

Arjunayanas[1]: Eastern Rajasthan. The Arjunayanas along with the Yaudheyas were a very powerful tribe.[2] They issued coins bearing the legend 'Arjunayanam Jaya'.[3] From the Allahabad Inscription, it appears that they were putting up outside the Aryavarta on the frontier of the Gupta empire. They may be located somewhere near Jaipur, between Bharatpur and Alwar States.[4]

Kiratanasikas[5]: These flat nosed people may be referred to either the Tibetans or some tribe of the Anglo (Tibeto) Mongolian race living in the northern ranges of the Himalayas. The Periplus[6] refers to the Cirrhadae with flattened noses, which are generally identified with the Kiratas, a Tibeto-Burman race occupying the middle Himalayan ranges in the neighbourhood of Nepal and Bhutan.

Kundapingalakas[7]: They may be located in the Himalayan hill States[8] of the Punjab and Himachal adjacent to the Kulu region.

Dasameyas[9]: According to Pargiter the Dasameyas were a Punjab tribe.[10]

Gavyas[11]: Gaddis of Chamba. The Gavyas are equivalent to the Gabbikas, the ancient name of the Gaddis of the Chamba State which were referred to by Patanjali,[12] as living outside the Aryavarta.

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1. BS xiv.25; iv.25; xi.59; xvi.22; xvii.19.
2. Allan, Cat lxxxiii. cf VGA p. 29.
3. CII iii pp. 1ff; EI xxii p.35; IHQ i p.250; JRAS 1935 p.697.
4. EHNI p. 159. cf IA xii pp. 231, 249; Smith, Cat p. 160.
5. BS xiv.26.
6. Schoff pp. 47, 253-54, 278.
7. BS xiv. 27.
8. EAI pp. 118-19.
9. BS xiv.28.
10. MaMk p. 330.
11. BS xiv.28.
12. Panini p. 43.

Gandhara[1]: It is the modern Kandahar, from Kabul valley to Taxila and comprised the Rawalpindi and Peshawar districts. Gandhara is mentioned in every type of literature of India. It is described by Strabo[2], under the name of Gandarities, as lying along the river Kophes, between the Choaspes and the Indus. Ptolemy refers[3] to the Gandharas whose country included both banks of the Kophes immediately above its junction with the Indus. The Chinese travellers called it Kien-to-lo, who locate it to the west of the Indus[4]. The most ancient capital of Gandhara was Puskaravati[5], Pu-lu-sha-pulo[6] of Hiuan Tsang, and Po-lou-sha of Fa Hien[7], and Peukelaotis of the Greeks.

There is no consensus among the various scholars on the identification of the Gandhara kingdom. Their views may be summarised thus[8]: S.K. Aiyangar holds that Gandhara was equivalent to E. Afganistan, extending from the Afghan mountains to the district somewhat to the east of the Indus. According to D.R. Bhandarkar[9], Gandhara included the western Punjab and East Afganistan. N.L. Dey[10] says that Gandhara lies along the Kabul river between the Kunar and Indus. Cunningham[11] on the authority of the Chinese travellers gives the following boundary of Gandara: 'Lamghan and Jalalabad on the west, the hills of Swat, and Bunir on the north, the Indus on the east and hills of Kalabagh on the south. Rhys Davids[12] says that Gandhara (modern

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1. EB xiv.28; iv.23; v.70,71; ix.21; x.7; xvi.26; xvii.18; lxix.26. cf Rg i.26.7; Mbh Adi ch x p. 118; Mat 114.41.
2. McC Ptolemy pp. 115-16.
3. Ibid.
4. CAGI p. 56.
5. Visnu iv. ch 4.
6. Watters i pp. 198-99.
7. Beal Fa Hien p. 34.
8. Ancient India, p. 7.
9. Carmichael Lectures, 1918, p. 54.
10. Dey, pp. 60-61.
11. CAGI p. 56.
12. BI p. 28.

Kandahar) was the district of East Afghanistan, probably including the North West Punjab.[1] V.A. Smith holds that it was equivalent to the North West Punjab and the adjoining regions.[2] Following Rapson, B.C. Law[3] maintains that Gandhara denotes the region comprising the modern districts of Peshawar in the North West Frontier Provinces & Rawalpindi in the Punjab.[4] It lay on both sides of the Indus. According to Zimmer, their settlement was on the south bank of the Kubha upto its confluence with the Indus, and to a certain extent to the east of the Indus itself.[5]

The Gandhara was known for its activities in the field of art from C.50 B.C. to A.D. 500. It was also a great centre of learning. Taxila, one of its capitals, was the venue of a reputed University in the Buddhist age. Both the cities of Gandhara, Puskalavati and Taxila, were the mint cities during the times of the Greeks, the Scythians, the Parthians and the Kushanas.

Himatala:[6] The western Himalayan range was variously known to the classical writers as Emodn, Emodi, and Hemodes.[7] Watters[8] states that the term Himatala is translated in a Chinese note by the expression 'Foot of snow Mountain'.[9] Yule points out that a trace of the word Himatala can be found in the name of one of the still existing provinces of Badakshan, Darain or Dara-i-aim. Hence it may refer to the kingdom of Khotan, near the Karaquorum range.

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1. Asoka, p. 170.
2. Ancient India, p. 81.
3. TAI p. 9; HGAI pp. 76-77.
4. PAHI 6th ed,pp. 58 ff.
5. Vedic Index vol i, p. 219.
6. ES xiv. 28.
7. McC Classical Writers p. 16 fn.1 and p. 35 fn.2.
8. Watters i. p. 278.
9. MNI pp. 89 ff.

Hunas[1]: The Hunas referred to by Varahamihira were the Hepthalites or the white Huns or Chinese Ye-thas, of Turco-Mongol race, who originally lived in the Altai region. In the beginning of the 5th century A.D. they were not an important people and owed allegiance to another nomadic tribe of Turkish origin called Juan-Juans who were occupying Mongolia. In the second quarter of the same century they started spreading westwards and "conquered the entire steppe area upto the Aral, and their territory thus included the valley of the Ili upto the Badkhash, the valley of the Issiq-Kul, the steppe of Chu and Chao, and the valley of the Jaxartes upto Aral"[2].

About 440 A.D., they occupied Sogdiana, Tokharistan and Balkha. After the conquest of Balkha, the Hepthalites, under their king Akhshunwar, invaded Khorasan in 484 A.D. and killed king Peroz, the Sassanian king of Persia.

Kalidasa[3] mentions them living on the banks of the Oxus. An abortive campaign of the Hepthalites has been referred to in the Bhitari Pillar Inscription of Skandagupta[3a].

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1. BS xiv.27; xi.61; xvi.38.
   cf Utpala p. 318.
2. India and Central Asia, p. 9;
   See also pp. 125-40.
3. Raghu iv. 69-70.
3a. CII iii p. 52.

It was only after 520 A.D. that they entered India, under Toramana and Mihiragula, and established themselves in the western sector of India. The Hunas are placed in the Punjab region in the Harsa Carita.[1] The Hunas were later on absorbed in the Indian population and are regarded as one of the 36 clans of the Rajputs.[2] It is quite possible that Varahamihira's Hunas lived in the country round Sakala (Sialkot) in the Punjab which was called Hunadesa and was also the capital of Mihiragula.[3]

Kaikayas:[4] Their territory comprised Jhehlum, Shahpur and Gujrat in the Punjab.[5] According to Ramayana their territory lay beyond the river Vipasa (Beas) and extended upto the borders of the ancient Gandhara kingdom with its capital at Girivraja which Cunningham identifies with Girjak or Jalalpur on the Jhehlum.[6]

Kailayatas:[7] It is Kalabagh on the right or west bank of the Indus at the foot of the Salt Range in the Bannu district.[8]

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1. p. 136.
2. SIHC pp. 277-329. The Early Empires of the Central Asia, pp. 309 ff, 455 ff, 485 ff.
3. Dey, p. 78.
4. MS xiv. 27.
5. ii. 68.19-22; vii chs 113-14.
6. CAGI p. 188.
7. BS xiv. 26.
8. Dey, p. 92.

Kaṭhadhanas[1]: They are the Kathaioi or Cathaeans who settled in the Bari Doab[2] during the time of Alexander's invasion.

Khacaras[3]: Khacara, it seems, is a corruption of Kharosthra which is identified with Kashgar.[4]

Kohalas[5]: Kohalas have been identified with the Kohilas, a Kulu tribe living in the Kangra district of the Himachal Pradesh.[6] Koluka is another name given to Kulutas.[7]

Kṣudrakinas[8]: They may be another branch of the Mina people, whose capital was Mināṇagara. The tradition runs that the Minas were among the earliest inhabitants of Rajputana.[9]

Madrakas[10]: See under the north west division.

Malavas[11]: Majha i.e. Malava region in the Punjab. The Malavas are identical with the Malloi of the Alexander's historians,[12] occupying the right bank of the lower Hydraotes (Ravi). They lived by the profession of arms. It seems from the finds of their coins that one of their branches migrated to Eastern Rajputana sometimes during or after the Maurya period.[13]

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1. BS xiv. 26.
2. PHAI pp. 250-51. cf McC Classical p. 38.
3. BS xiv.28.
4. Stein, Sand Buried Ruins of Khotan, p. 404.
5. BS xiv. 27.
6. A Glossary of the Tribes and Castes of the Punjab and NWFP, Lahore 1914 ii pp. 553 ff.
7. Day p. 102.
8. BS xiv. 24.
9. IGI 1908 xxi p. 114.
10. BS xiv. 27.
11. Ibid.
12. PHAI p. 254; CHI i p. 336; Dey, p. 122.
13. JRAS 1897 p. 883; Smith, Cat p. 161; Allan, CCAI p. cv.

Mandavyasi[1] The Mandavyas may be identified with the people of Mandi[2] in the Himachal Pradesh which is the same as Mandamati of the Yavadigana[3] of Panini.

Pauravas:[4] On the eastern bank of river Jhelum. It is suggested that either the Hydaspes was the earlier home of the Purus where-some remained after the others had wandered east, or the later Purus represent a successful onslaught upon the west from the east.[5] Poros, contemporary of Alexander, represents the Sanskrit Puru or Paurava.

Rajanya:[6] Hoshiarpur district of the Punjab. The Rajanya coins bearing the legend Rajana-janapadasa written in Brahmi characters are found mainly from the Hoshiarpur district of the Punjab.[7]

Sitakasi[8] Sitakas were settled on the river Sita identified with Syr-Daria or Jaxartes.

Syamakhasi[9] In the Chinese books, description is given of the kingdom of dogs where men have the bodies of dogs.[10] It has been noticed that the dogs of Tibet are very big in size and had formidable strength.[11] Can we infer that the 'dog-faced people' refer to the Tibetans or the some other Mongoloid peoples living on the borders of the Himalayas.

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1. BS xiv.27.
2. ESAI p. 118.
3. Asta viii.2.9.
4. BS xiv.27. cf Rg x.33.4.
5. Vedic Index ii pp. 12-13.
6. BS xiv. 28.
7. CCAI lxxxvii pp. 210 ff and cxxii-cxxiii; EHNI pp 41,42-44. Jayaswal, Hindu Polity, i pp. 158-59.
8. BS xiv.27. cf Dey, p. 187; ESAI pp. 84,119.
9. Ibid. 25.
10. Schuyler, E., Turkistan, i p. 409.
11. IA iv p. 225.

Trigarta[1]: Traikarta[2]: Trigarta means the land watered by three rivers[3]. The upper portions of the Ravi, Beas and Sutlej formed the Trigarta country[4], along with Jullundur and a part of Lahore[5]. It was also called Jalandarayana[6]. The coins of the Audumbaras are found from this territory[7]. According to the Rajatarangini the ancient kingdom of Trigarta included the Kangra district.

Udicyas[8]: It was a term used in Vedic and later Sanskrit literature[9] to denote the northern quarter. The river Saraswati was the boundary line between the Udicyas and the Pracyas in the earlier period and the Gupta times[10]. The north west region of Saraswati (Ghaggar) was called Udicya and south east Pracya.

Uttara Kurus[11]: They are probably the same as Ottorokorra of Ptolemy. In later literature the land of the Uttara Kurus was known as an earthly paradise. Lassen places it to the east of Kashgar[12], whereas Dey locates them in northern portion[13] of Garhwal.

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1. BS xiv.25.
2. Ibid. x.11; xvi.22; xvii.16.
3. ASR v p. 148; Mark p. 321,347 fn.
4. Panini pp. 68-69. cf Rt I p. 81.
5. Dey, p. 205.
6. CCAI cxl; PHAI p. 68; IA xvii p. 8.
7. I p. 138.
8. BS xiv.25.
9. Ait.Br. viii.14.
10. Panini p. 42.
11. BS xiv.24. cf Ait Br viii.14.
12. Dey p. 214.
13. Ibid. p. 213.

Yaudhanas[1]: It is modern Bhatnair in the Punjab. They[2] lived on the east side of the Sutlej southwards from Perozepur. K.P. Jayaswal,[3] however, identifies them with the Pathana.

Yaudheyas[4]: Eastern Punjab. Their coins[5] are found in the area[6] extending from Saharanpur to Multan. According to Cunningham the Yaudheyas lived on both banks of the Sutlej along the Bhawalpur frontier, which is called Johiyabar. Dey locates them between the Hydaspes and the Indus. They played a very important role in ousting the Kushanas' rule from India. Their supremacy remained unchallenged during the third and fourth centuries. They lost their independence during the time of Samudragupta.

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1. BS xiv. 26. cf Mbh 11.32.8; Mark ch.57.
2. Mark p. 312.
3. IA lxii pp. 121 ff.
4. BS xiv. 28. cf Adi 96.76; Asta v.3.117.
5. CCAI cli. cf JRAS 1897 pp. 887 ff.
6. ASR vol. xiv. cf CII iii p. 251.

SECTION X

NORTH EASTERN DIVISION

The Brhat Samhita enumerates 36 settlements in the north eastern division; Parasara, 27; Markandeya, 33 in the first list and 13 in the second list; Brahmanda, Matsya, and Vayu, 12 each; Brahma, and Vamana, 13 each; and Garuda, 7. The account of the Vayu Purana is copied by the Matsya, Markandeya and Brahma Puranas. The sources such as the Vayu, Brahmanda, Vamana, Brahma Purana etc. apart from being deficient in content, supply different lists. The list supplied by the Brhat Samhita is completely corroborated by the list of the Markandeya Purana, with the exception that latter does not contain three names, viz., Meruka, Nastarajya and Divistas of the former, whereas the settlement of Yavanas of the list of the Markandeya Purana is not mentioned in the Brhat Samhita.

Varahamihira's list consists of the following:Meruka, Nastarajya, Pasupalas, Kiras, Kasmiras, Abhisaras, Daradas, Tanganas, Kulutas, Sairindhas, Vanarastra, Brahmapura, Darvas, Damaras, Vanarajya, Kiratas, Cinas, Kaumindas, Bhallas, Lola, Jatasura, Kunahas, Khasas, Ghosas, Kucikas, Ekacaranas, Anuvisvas, Suvarnabhu, Vasuvanam, Divistas, Pauravas,

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1. 58.49 ff.
2. 57.56 ff.
3. 49.69 ff.
4. 114.55 ff.
5. 45.135 ff.
6. 27.62 ff.
7. 13.57 ff.
8. 1.58.1.
9. 57.56 ff.
10. 58.49 ff.
11. See under south western division.
12. A fabulous term.
13. Lola, Vasuvanam and Divistas are not identifiable.

10a. May be located in the vicinity of Vanarajya.

Ciranivasanas, Trinetras, Munjadri, and Gandharvas.[1] It has been seen earlier that a number of settlements such as enlisted in the north eastern division of India by Varahamihira should have either been included in the northern or north western divisions. Similarly Meruka could have been located in the northern region along with Mera.

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1. A fabulous term and can not be identified.

MOUNTAINS

Meruka[1]: See under the northern zone.

Munja[2]: The Mahabharata[3] places the hill at the back of the Himalayas. In Zimmer's view, Mujavant (Munja) was one of the lower hills on the south west of Kashmir.[4]

FORESTS

Vanarajya[5]: If it is Vamava of Panini's Sutra,[6] it denotes the Bannu region and Waziristan. Vanarajya may correspond to the Banagara of Ptolemy.[7]

KINGDOMS

Mahavrajya[8]: The 'kingdom of the dead' may be identified with Nast or Jagatsukh in the upper valley of the Beas, the ancient seat of the Pala Rajas of Kulu.[9]

Suvarnabhumi[10]: It is difficult to agree with Kern who takes it to be a mythical land. It corresponds to the Gold country of Hiuan Tsang[11], Su-fa-la-na-kiu-ta-lo or Suvarnagota which was

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1. BS xiv.29.
2. Ibid. 31.
3. xiv.8.1.
4. Macdonell and Keith, Vedic Index of Names and Subjects, vol.ii p. 169. Dey p. 131.
5. BS xiv.30. cf Rama i.6.22.
6. IHQ xxvii.11; xxix.10.31.
7. MM p. 141.
8. BS xiv.29. cf Utpala pp. 293-94.
9. Atkinson ch. ii p.9 fn.3.
10. BS xiv.31.
11. Beal i. p.199. cf JRAS 1871 p. 86 fn.5; Dey p. 198; Havell, E.B., History of Indian and Eastern Architecture, p. 612.

situated between Yu-tien (Khotan) on the north and Tu-fan (Tibet) on the east. To the classical writers this region was known as the land of the gold digging ants which is also referred to by the Mahabharata.[1]

CITIES

Brahmapurai[2] Brahmapura is Vairatpattan situated in the north east direction[3] of Hardwar in the Kumaon and Garhwal districts. Hiuan Tsang[4] visited this place during his stay in India.

COUNTRIES AND PEOPLES

Abhisarai[5] Hazara district of the Peshawar division. It is the Abisares of the Greeks.[6] Stein,[7] however, identifies it with the tract of the lower and middle hills between the Jhelum and Chenab including the state of Rajapura (Rajauri) in Kashmir. The people had no reputation for good conduct during the time of Kalahana.[8]

Anuvisvas:[9] The Anuvisvas were a hill tribe occupying the region between Nari Khorasum and Indian border land.[10]

Khallas:[11] Fleet renders it as Khilla which is untenable as both Utpala and Parasara give 'Khalla'.[12] Khallas are most[13]

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1. 11.52.3-4, 13-14.
2. BS xiv.30.
3. CAGI pp. 407-9; Dey p. 40; HGAI p. 72.
4. Watters i. p. 329; Julien i.434; ii.231.
5. BS xiv.29; xxxi.19; AI i.199.
6. Invasion of India by Alexander p. 69 fn.3.
7. RT i.p. 32; ii p. 432 of JASB 1852 p. 234.
8. Ibid. i. p. 81.
9. BS xiv.31. Another reading is Anuvidha, Utpala pp. 293-4.
10. HGAI p. 129.
11. BS xiv.30.
12. I IA xxii p. 175.
13. Utpala p. 294.

probably the Bhallanasah, a non-Aryan tribe mentioned in the Rgveda[1] identified with the region of Bolan pass.[2]

Cina:[3] Mahacina:[4] It is modern China.[5] The Mahabharata mentions them as highly respectable people, but according to Manu they were degraded Ksatriyas. Their country was famous for a particular breed of horses.[6] B.C. Law,[7] however, locates it in the Himalayas beyond Cilata or Kirata. According to another writer the Cinas represent the people of modern Gilgit, Astor and Yasin.[8]

Daradas:[9] Kashmir: The name is frequently mentioned in the Rajatarangini as the designation of a class of feudal landowners of Kashmir.[10] Pliny mentions a people called Dimuri.[11]

Darada:[12] It is modern Dardistan, the district of Dardo in the north of Kashmir on the upper bank of the Indus. Strabo mentions them as Derdai; Pliny as Dardae and Ptolemy as Daradrai and locates them east of the Lambatai (Laughan) and of Sonestane (Swat river) and to the north of the upper most course of the Indus.[13] According to Megasthenese[14] the gold came from the country of the Dardae.[15] Stein identifies its capital Daratpuri with modern Gurez.

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1. vii.18.7. Macdonell and Keith op.cit. vol ii p. 99.
2. Dey, p. 31. cf HGAI p. 143 fn.8.
3. BS xiv.30; v.77,78,80; x.7.11; xi.61; xvi.1,38; Mark ch.57.39; Apadana i.p.2; ii.p.369; Malindapanho pp. 327-28, 331; Mahavastu vol i p. 171.
4. Ibid. v.3.
5. Udyog xviii. pp. 584-85. cf Mark p. 319.
6. Ibid. lxxxv. 3049.
7. HGAI p. 73. cf Dey p. 49.
8. Atkinson ch. ii p. 13.
9. BS xiv.30.
10. RT i. p. 154; ii. pp. 307 ff.
11. McC Meg p. 152.
12. BS xiv.29; v.42,79; xlii.9. cf Visnu ii p. 194; Mbh comm.45-51; Drona ch.10.18.
13. YAI p. 86. 14. CHI i. pp. 362-63.
15. RT i p. 47. cf India and China p. 109; Dey p. 53.

Darva:[1] Hill regions between Vitasta and Candrabhaga. The Darvas are grouped with the Trigarttas, the Daradas etc., to the north of the Punjab in the Mahabharata.[2] At another place they are combined in a single appellation[3] with the Abhisaras which is further testified by Rajatarangini.[4]

Gandharvas:[5] Gandharvas are the same as the Gandharas.

Ghoshas:[6] See under Madhyadesa.

Jatasurasa:[7] They may be identified with the people living on the banks of river Jaxartes.

Kasmira:[8] Kasmiraka:[9] Kashmir. In the 3rd century B.C. according to Kalhana,[10] Kasmira was included in the empire of Asoka and in the beginning of the Christian era, the Kushanas are known to have brought it under their supremacy. Their emperor Kaniska constructed a new city namely Kaniskapura[11] which has been identified with Kanpur Sarai,[12] 10 miles to the south of Srinagar. Huviska,[13] one of the successors of Kaniska built Hushkapura. Hiuan Tsang's Hu-se-Kia-lo or Hushkara, is identified with Baramula on the Behat.[14] Srinagari, the old capital of Kasmira prior to the erection of Pravarasenapura, the new capital built by Raja Pravarasena II in the beginning of the sixth century A.D.

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1. BS xiv.30.
2. Mark p. 324 fn.
3. Mbh viii. 73.19-20.
4. i. p. 32 fn; vol.ii p. 432.
5. BS xiv.31; xlii.8; lxxxvii.33.
6. Ibid. xiv.30.
7. Ibid.
8. Ibid. 29; v.77,78; ix.18; x.12. Also mentioned by Panini iv.2. 133; v.3.93; Bhasya i.1.44; Divyavadana p. 399.
9. Ibid. v.70; xi.57. cf Rt i.105, 168; CAGI p. 115.
10. RT i, 105.
11. Ibid. i 168.
12. CAGI pp. 114-5.
13. RT iv p. 128.
14. CAGI p. 115.

stated to have been built by Asoka,[1] is identified with an old site 2 miles to the south east of the Takht-i-Suliman called Pandrathan.[2] The site of the new capital Pravarasenapura is that of the present capital of Srinagar.[3] Mihirakula is stated to have ruled over Kashmir sometimes after 527 A.D. after his defeat by Baladitya, the Gupta monarch. A new dynasty known as Karkota dynasty was founded by Durlabhavardhana who married the daughter of the last king of the Gonarda dynasty named Baladitya, and as the latter had no son, succeeded the throne in C. A.D. 627. The greatest king of this dynasty was Lalitaditya Muktapida (C 724-60 A.D.). Martanda, the temple of the sun, which stands on a slope about three miles east of Islamabad was built by Lalitaditya.[4] The country and the people are noticed by classical writers. Hiuen Tsang reached the country of Ka-sse-mi-lo (Kashmira) from Wu-la-shih,[5] i.e. Hazara.[6] Hemacandra refers to a variety of names such as Madhumata, Sarasvata, and Vikarnika as the alternative names of the country. It is difficult to define its limits in ancient India.

[7] Kirai Kangra in the Himachal Pradesh.

[8] Kucikasi It is Kuca or the ancient Kuca, situated on the north route of the Tarim region known as Ser-India. It was one of

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1. RT i, p. 104.
2. CAGI p. 108.
3. Ibid., p. 112.
4. McCrindle's Ancient India as described by Ptolemy (Mazumdar, S.N., ed.) p. 306.
5. Watters, i, pp. 257-62.
6. Abhidana, p. 382 (Bhavanagar).
7. BS xiv.29; iv.23; xxxi.19.
8. Ibid. 30. cf Mbh i. 144.2 and 11.48.2.

the important kingdom under the influence of the Buddhism.[1] Kucika is the same as Kicaka (where the bamboos grow) mentioned by Kalidasa.[2]

Kaulūta:[3] **Kuluta**:[4] It is the modern Kulu valley of the Himachal Pradesh.[5] Kuluta, Hiuan Tsang's Kue-lu-to is placed by him to the north east of Jullundur.

Kunatas:[6] Rendered as Kunahas[7] they may be identified with the people of the region of Kumihar, a small Simla Hill state of the Himachal Pradesh.

Kaulinda:[8] **Kauninda**:[9] Upper eastern Punjab and Saharanpur. They may be identified with the Kulindrine of Ptolemy.[10] McCrindle[11] locates them between the Meru and Mandara mountains, whereas according to Pargiter,[12] their territory can be extended further east along the southern slopes of the Himalayas as far as Nepal. Rapson[13] gives them the territory of the Sutlej in the Simla Hills. Dey, however, locates them in the Garhwal including the district of Saharanpur,[14] north of Delhi, and Cunningham[15] with Jullundur.

Khasas:[16] The Khasas were Tibetans living in the Nari Khorasum region of Tibet. The Cesi of Pliny are identified with

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1. India and Central Asia, pp. 66 ff,
2. Raghu iv.71-73.
3. BS x. 11.
4. Ibid. xiv.29. cf Visnu ii, p. 174.
5. Watters ii, p. 298.
6. BS xiv.30.
7. MSAI p. 143 fn.11 and p. 128.
8. BS iv.24.
9. Ibid. xiv.30,33. Parasara gives Kuninda, Utpala, p.294.
10. McC Ptol p. 110.
11. Ibid.
12. Mark p. 316.
13. CHI i p. 476.
14. Dey p. 106. cf CCAI pp. cii ff; VBA p.25.
15. CAGI p. 157; ASR vol xiv.
16. BS xiv.30.Fleet gives Khasha(IA xxii 181) cf.Utpala p.293.

the Khasas who occupied the west of Tibet.[1] Ptolemy's Kasia correspond to Kashgar.[2] The Khasas may have left their name in Kashgar, Kashkara, the Hindukush, Kashmir.[3] The Mahabharata mentions them as a half civilised tribe living outside India and are described as Mlecchas in the Harivamsa. Manu regards them as a fallen warrior class.[4]

Pasupalas:[5] It is supposed that they may be referred to the Gaddis, the shepherds of the Kulu valley who master large flocks of sheep and goats.[6] The Kulu valley contains several dense grazing grounds and lofty grass summits.

Paurvas:[7] See under the northern division.

Sairindhara:[8] Sirhind: The Sairindhras correspond to the people of Sirhind of the Punjab.

Tanganas:[9] Ladakh:[10] In the Mahabharata the Tanganas are the neighbours of the Khasa.[11] Pargiter says that they were intermixed with other mountain tribes, and inhabited a country in the middle portion of the Himalayas.[12] They are also regarded as the same as the Ganganai of Ptolemy.[13]

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1. McC Meg pp. 145-46.
2. MM pp. 303-4.
3. Atkinson ch. ii pp. 28-29 cf RT i.p.47 fn.
4. x.43-44. cf Sukraniti ch. iv sec.v line 98.
5. BS xiv.29.
6. ESAI p. 142.
7. BS xiv.31.
8. Ibid. 29. cf Dey p. 172; ESAI p. 124.
9. Ibid. 29.
10. Dey p. 204.
11. ii.62.3.4., 13-14.
12. Mark p. 323.
13. MM p. 210.

Trinetra:[1] Most probably Trinetra (three-eyed) people refer to the worshippers of god Siva (who has three eyes) living in and near the mountainous region of the Himalayas. Trinetra may be identified with Sunet i.e. Sunetra, in the Ludhiana district (which lies near the foot of the Himalayas) or was situated nearby. Ludhiana itself is derived from Rudrayana, i.e. Siva.

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1. BS xiv. 31.

CHAPTER IV

FINE ARTS

INTRODUCTION

The Gupta age heralded a new epoch in the history of Indian architecture, both secular and temporal, and sculpture, painting and other ancillary fine arts. The works of Varahamihira which are a precious treasure-house of information on the subject, bear ample testimony to the pace of progress made in the field during the age.

Varahamihira devotes considerable attention to the art and technique of the above mentioned branches of art. He seems to believe in the divine origin of the science from Brahma handed down through a chain of sages, whose works were a source of great inspiration to him.[1] Unlike Varahamihira, Utpala gives a quasi-historical account of sages such as Brahma, Garga, Parasara, Brhadratha, Visvakarma, Vasudeva etc., as being the expounders of this science. Though these authors are mere mythological beings and their historicity can hardly be ascertained or established, but they may be relevant to the extent to which they help form some idea about the background knowledge of the science available to Varahamihira during his times.

His philosophical interpretation of Vastunara or Vastupurusa that the building is the reduced replica of the universe, is based on the traditional account as in other texts viz., architectural expositions like the Mayamata, Manasara etc.; and non-architectural works like the Matsya Purana, Agni Purana, Visnudharmottara; the Agamas like the Kamika; and a number of

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1. BS liii. 2-3.

miscellaneous treatises like the Manu Samhita, Kautilya's Arthasastra, Epics as well as the later Silpa works. He acknowledges the earlier authorities on various aspects of the science as will be seen elsewhere in the chapter. The impact of earlier authorities on the writings of Varahamihira in respect of various sections of fine arts is further evident from a number of quotations cited by Utpala from such authors in his commentary on the Brhat Samhita, inasmuch as they present a comparative study and bring out similarities with the account of Varahamihira.

Utpala furnishes us with three verses, on the origin of Vastunara, of Brhaspati; two on the measurements of king's houses, of Kasyapa; four on the Sarvatobhadra, Vardhamana, Svastika and Rucaka type of houses, nine on the soil tests, seven on the omens and superstitions concerning the house, seventeen on the various rites and worship of gods and goddesses at the time of Silanyasa ceremony, of Garga; and opinions of Visvakarma, Maya, Hiranya Garbha and Sakra on the two-roomed houses; vis-a-vis the corresponding description of Varahamihira. A close examination of Varahamihira's text vis-a-vis Utpala's commentary in the light of quotations from other authors brings to surface three facts in the main, firstly, the accounts of different authors are similar to that of Varahamihira, secondly, Varahamihira was indebted to the earlier writers and thirdly, it was Garga who influenced Varahamihira the most.

Varahamihira also owed a lot to the authors of the Grha Sutras on the subject of Vastuvidya. Many parallels of the descriptions of Varahamihira are found in the Grhasutras.

Varahamihira's account as to the selection of site for construction of a house is[1] analogous to that of the one given in the Asvalayana Grha Sutra.[2] Both these accounts recommend that a ground for the house should be soft, even,of sweet odour and taste and abounding in commendable herbs, trees and creepers and not hollow inside. The Apastamba Grha Sutra[3] lays down that the plot should be sloping to the south-east. Varahamihira seems to interpret it differently. He allots different directions for each caste, but Brahmanas may dwell in any direction other than the one particularly prescribed for them. Thus if there is/slope towards the north, the / a ground is auspicious for the Brahmanas; one towards the east, for Ksatriyas; one towards the south, for Vaisyas;and one towards the west,[4] for Sudras. The account of Varahamihira regarding the prescription[5] of colour of the soil for the houses of different castes, white for Brahmanas; red for Ksatriyas; yellow for Vaisyas; and black for Sudras,[6] is similar to that of the Asvalayana Grhya Sutra, but it does not agree with that of the Gobhila Grhya Sutra,[7] inasmuch as it mentions the black colour[8] for a Vaisya. He also differs from the Gobhila Grhya Sutra[9] on the allotment of different grasses peculiar to the houses of various castes.

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1. BS liii.88.
2. ii.7.1-4,9. cf. Gobhila Gr.S. iv.7.2-4,12,13.
3. vii.17.1.
4. BS liii.91.
5. Ibid. 96.
6. ii.7.6-8.
7. iv.7.7.
8. BS liii. 97.
9. iv.7.9-11.

The various tests enumerated by the writer apparently for examining the stability of the soil[1] are also similar to the account of Asvalayana Grhya Sutra.[2] Though the account of Varahamihira on the plantation of trees around the house is a bit different from the one mentioned in the Gobhila Grha Sutra, but the underlying idea of classifying trees as having bad or good effects on the house and its inmates by one or the other kind of tree remains the same.[3] In the Gobhila Grha Sutra plantation of trees such as Asvattha, Plaksa, Nyagrodha and Udumbara is prohibited on the eastern, southern, western and northern sides of the house respectively, because of their malefic effect, but if the said trees stand in the direction other than those prohibited for each, no danger will befall the house.[4] Varahamihira is, however, of the view that the Pippala, Banyan, Indian Fig and Asvattha trees planted in the four corners of the house beginning with the south bring bad luck, but while in the directions beginning with the north they are favourable. He is particularly against the thorny trees, milky ones and those laden with fruits near the house as also the use of their timber in the construction of houses. He further suggests that such trees are required to be cut down or otherwise worshippable ones like the Punnaga, Asoka, Arista, Bakula, jack, Sami and Sala should be planted amongst them to ward off their bad effect.[5]

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1. BS 1111. 92-93.
2. ii.8.1-5.
3. iv.7.20-23.
4. BS 1111.85.
5. Ibid. 86-87.

Regarding the location of rooms in particular direction, we can draw the parallel with the Asvalayana Grha Sutra[1] and its commentator Narayana. In the site plan of Varahamihira[2] kitchen should be built in south-east direction of the plot, whereas the Asvalayana Grha Sutra and its commentator Narayana locate it in the eastern part of the house.

The superstitions connected with the location of doors of the house in different directions as outlined by Varahamihira[3] seem to have been prevalent also during the time of the Kalpasutras. In this connection the Gobhila Grha Sutra[4] lays down that one who is desirous of fame and strength should build the house with its door to the east and one desirous of children and cattle, to the north. One desirous of all these things should build the house with its door to the south, but one should never build a house with its door to the west. According to this prescription the position of the door facing towards the south was considered to be the best. The Apastamba Dharma Sutra lays down the rule that the gates of the town and the palace should face the south. The Kathaka Grha Sutra states that the door of a house should face to the east or the south. Varahamihira is equally indebted to the authors of the Grha Sutras[6] on topics such as the time for construction of house,

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1. ii. 7.6-11.
2. BS liii. 118.
3. Ibid. 70-75.
4. iv.7.14-17.
5. ii. 10.25.2.
6. BS liii. 98. cf Paraskara Gr.S. iii. 4.2; Hiranyakesi Gr.S. i. 27.1.

preparation of the plot[1], the foundation-laying ceremony[2] and Grha-Pravesa (first entry into the new house)[3]. Mamm is another authority whose texts on the subject have been followed by him very closely as stated by Varahamihira himself[4].

The influence of earlier authors on Varahamihira on the temple architecture is also evident. Varahamihira quotes Maya and Visvakarma[5] while dealing with the height of a storey of a temple. According to Maya, the height of a storey should be 108 digits, while according to Visvakarma it is 84 digits. Varahamihira appears to reconcile the divergent views by adding the height of the crown-work (Kapotika) to the latter so that the height of both should be equal. Sage Kasyapa has been variously quoted by Utpala on the subject of temple architecture in his commentary. He quotes as many as three verses of Kasyapa on the selection of site for a temple, the account of which is similar to that of Varahamihira[6]. Again on the natural surroundings of a temple Varahamihira follows Kasyapa very closely. The account of Varahamihira regarding characteristics of temples is also identical with that of Kasyapa. Utpala here quotes seven verses of Kasyapa on the subject as against the six verses of Varahamihira[7].

1. BS LIII.99-104. cf Asvalayana Gr.S. ii.7.5; Sankhayana Gr.S. iii.2.1; Hiranyakesi Gr.S. 1.27.1; Rgveda vii.35.
2. Ibid. 112-14 and xliii.62-66. cf Hiranyakesi Gr.S.1.27.1-8; Apastamba vii.17.3;Sankhayana Gr.S. iii.2.1-9; Asvalayana Gr.S. ii.8.14-16; Paraskara Gr.S.iii.4.3-4; Manava Dh.S.ii.11.7.
3. Ibid. 125. cf Asvalayana Gr.S. ii.10.1-2; Sankhayana Gr.S. iii.4.9-10.
4. Ibid. lvi.81.
5. Ibid. 29.
6. Ibid. 1-2.
7. Ibid. 11-16.

Likewise, while discussing the various types of temples enumerated by Varahamihira Kasyapa is regularly quoted by Utpala on almost all the types giving similar description. But while it may be said with a measure of certainty that the influence of Kasyapa has been profound on the writings of Varahamihira it cannot be helped pointing out that Varahamihira does not take any credit for propounding or expounding any theory for the construction of temples inasmuch as that he acknowledges the authority of his fore-runners whose works inspired him. And that stands amply proved by this comparative study.

Iconometry is another subject of which equally elaborate account is available in the writings of Varahamihira. As in the case of other branches of knowledge, Varahamihira is indebted to the earlier writers in the field of iconography as well. Varahamihira acknowledges Nagnajit's authority on the subject whose influence on him is manifest in their identical views on the length and breadth of an idol[1] and the circumference and width of its head[2] as brought out by Utpala. He also does not miss to acknowledge the authority of Vasistha, whom he follows on the distance between the eye-corner and the ear of an idol.[2a]

Kasyapa is another writer who greatly influenced Varahamihira in the matter of iconography as well. Utpala quotes eighteen verses of Kasyapa on the proportionate measurements of

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1. BS lvlii.4.
2. Ibid. 15.
2a. Ibid. 8.

the body of an icon as against twenty-six of Varahamihira. The approach on the subject in both these accounts has been identical. Sixteen verses of Kasyapa are quoted by Utpala on the description of various idols. Whereas the text of Varahamihira presents a detailed description of the main deities such as Visnu, Siva, Surya etc., Kasyapa's account is rather very short. Kashyap, however, refers to incarnations such as Narasimha (Man's Lion) and Varaha (Boar), which are conspicuous by their absence in the account of Varahamihira.

Varahamihira presents a complete picture of the growth and development of Indian architecture, secular as well as temporal, right from its simple beginnings with the Rgveda including the Kalpasutras to a highly developed form in the Gupta times. Taking into consideration all aspects of construction, the Varahamihira's account of architecture is by far the most exhaustive in the Brhat Samhita, Samasa Samhita and Yoga Yatra. The description of different types of houses, and other minute details of construction which is absent in the earlier accounts of the Grhya Sutras, is exhaustively treated in the works of Varahamihira. His sections on the architecture, secular as well as temporal, and iconometry abound in detailed description of proportionate measurements and techniques. The pace of progress of his age is manifest in his classification of temples and icons into numerous categories as will be revealed by the relevant portions in this chapter.

From the above account it may be difficult to suggest that Varahamihira was an original writer in the field of fine arts. He is definitely indebted to the earlier works on the subject and their influence on him is manifestly clear in his writings. He combined the different prevalent traditions and compiled the mass of knowledge lying scattered in ancient texts for the benefit of posterity, much of which, but for him, would have lost to us. As already stated elsewhere he was a great scholar and interpreter of his age. His main contribution in the field of architecture and sculpture is not the discovery of new facts or propounding new theories but the preservation, arrangement and ordering the accumulated knowledge available at his time, wherein his greatness lies.

SECTION I

ARCHITECTURE (VASTUVIDYA)

Varahamihira deals with the science of architecture and town planning with special reference to the construction of palaces, dwelling houses and temples. He describes in detail the planning of cities and towns but peculiarly enough he leaves no information as regards the planning of a village which has been the basic unit of Indian life right from the Vedic period, excepting a casual reference to its shape as square[1], though on the contrary we have quite a good number of references to the villages, their set up and types in various Buddhist and Jain literature like the Jatakas and the Brhatakalpa Sutra Bhasya[2].

The urban civilisation of India dates back to the third millennium B.C. when an appreciable advance in the field of architecture is noticed in the twin Indus Valley cities of Harappa and Mohenjodaro. The city-building tradition had been maintained in India upto the times of Varahamihira with a temporary break during the Vedic period. An Idea of the prosperity and affluence of the ancient Indian cities can be had from any religious or secular literature composed within the 1200 years i.e., 600 B.C. to 600 A.D.

The age of Varahamihira is marked by the tendency to beautify towns and cities, the beginning of which may be traced to Kautilya's Arthasastra. That is why the mansions,

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1. BS liii. 69.
2. i. 331-333. cf Motichandra, 'Architectural data in Jaina Canonical Literature', JBBRAS vol xxvi pt.ii, 1951, pp.171 ff.

temples, forts, parks and gardens occupy much attention of the writers of and ent architectural texts. During the period under review cities had come to be looked upon as centres not only of trade and commerce but also of culture. Vatsyayana's glorification of the city life is in itself an evidence of the growing popularity of the cities and the city life.

SELECTION OF SITE: In the planning of a town (pura) or a house it is the foremost concern of the architect (Sthapati) to select an auspicious and good site, and its surroundings. Varahamihira lays down that the ground for the site of a residential house[1] should be soft, even, of sweet odour and taste; somewhat upraised. The site should have useful and healthy vegetation, abundant supply of water, and free from harmful animals.[2]

The society of Varahamihira's time was caste-ridden and even the selection of a site for residential purposes followed caste complexes. Varahamihira recommends the selection of a house site on the basis of the colour of the soil assigned to each caste such as white soil for the Brahmanas, red for the Ksatriyas, yellow for the Vaisyas and black for the Sudras. The smell of the soil and the kind of the grass grown over it were the other criteria for the selection of residential sites for various castes. Thus, he favours the soil smelling of Ghee, blood and liquer as well as covered with Kusa, Sara, Durva and Kasa for the house sites of the Brahmanas, Ksatriyas, Vaisyas and Sudras respectively.[3]

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1. BS liii. 88. cf VD iii. ch. 93; Mat cclii.16-17; Mana v.34-37; SSD viii.67-68; VK i.61; Asvalayana Grha Sutra ii.7.1-4.
2. KK x.15-20. cf Mat cclii. 12-15; Bhav ch. [illegible]; Mana ch. xii and ch xxxvii; Maya chs. iii and iv; SSD xliv.6-10; Yuktikalpataru ch. 256, 3-10.
3. BS liii. 96-97. cf Asvalayana Grhya Sutra ii.7.6-9; Mat cclii.11-13; Gobhila Grhya Sutra iv.7.7,9-11.

Varahamihira further suggests various tests to check the stability of the ground and availability of water.[1] For instance he says that " a pit, one cubit deep in diameter, should be dug on the ground in the centre of the house-site and filled again with the same earth which was taken out of it. If the earth reaches out of the pit, the ground is excellent. If the pit is filled to the level, the ground is of middling quality. If the pit is not filled completely with that earth,[2] the ground is to be rejected. The second method for the examination of the soil is that the same pit should be filled with water and after walking a distance of a hundred steps if it is found that the water in the pit has not diminished[3] the soil is the best for house-site, and so on and so forth. Still another test may be performed by placing lamps inside unbaked earthen pots in the four directions within the pit and that quarter of the site in which the lamp burns the longest is auspicious for the particular caste.[4] Likewise flowers of four colours as assigned to the respective castes should be placed in the pit at night and kept

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1. BS liii. 92-95. cf Garga, Utpala; Bhav cxxx.45-46.
2. BS liii. 92. Similar test is prescribed in the Asvalayana Grhya Sutra ii.8.1-3.
3. BS liii. 93. It is different in the Asvalayana Grhya Sutra ii.8.4-5. It is stated that after sunset the pit should be filled with water and left so till the next morning. If the water remains in the pit till the following morning the ground is excellent. If the pit is found to be moist, the ground is of middling quality. If the pit is found to be dry, the ground is to be rejected.
4. Ibid. 94. Similar tests are also prescribed by Garga who is quoted by Utpala.

NORTH

81 SQUARE SITE PLAN

WEST

ROGA	AHI	MUKHYA	BHALLATA	SOMA	BHUJANGA	ADITI	DITI	ŚIKHI
PĀPYA-KṢMA	RUDRA						ĀPAH	PAR-JANYA
ŚOṢA		RĀJAYA-KṢMA	PRITHVĪDHARA				JAYANTA	
ASURA							INDRA	
VARUṆA		MITRA				ĀRYAMĀ	SŪRYA	
KUSUMĀDANTA			BRAHMĀ				SATYA	
SUGRĪVA		INDRA	VIVASVAN			SAVITA	BṚṢA	
DAUVĀRIKA	JAYA	BṚṄGARĀJA	GANDHARVA	YAMA	BṚTKṢATA	VITATHA	SAVITRA	ANTARIK-ṢA
PITṚ	MṚGA						PŪṢĀ	ANILA

EAST

SOUTH

under the observation till the following day. The site will thus be propitious for the caste whose flower does not fade away in the process.[1] The ground is also purified by various rites performed on auspicious days and under favourable stars and subsequently made habitable by ploughing and sowing of certain types of auspicious cereals.

SITE PLAN (Vastupurusamandala): The general plan of a town, house or village is square. It is the fundamental form of Hindu architecture, designated as Vastu-Purusa-Mandala and has Vedic origin. The Vedic Fire Altars (Vedi) are square as a rule, the significance of which has been correlated with general square plan of Hindu architecture.[2] The square plan could be converted into a triangle, hexagon, octagon and circle of equal area and retain its symbolism.[3] Varahamihira describes two types of site plans.[4] The first consists of eighty-one squares (Ekasitivibhaga).[5] Each square of the plan is called a Kostha or a Pada and has its own presiding deity (cf Chart is enclosed).[6] There are mainly two broad divisions of these deities, namely the internal

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1. BS lili. 95.
2. Visnu Samhita xii. 36-42.
3. cf. Baudhayana Sulva Sutra i.22-28; HT pp. 22,27, 31-32; Hevell, E.B., History of the Aryan rule in India, p. 25; Dutta, B.B., Town planning in Ancient India, p.7; Tripathi, M.P., Survey and Cartography in Ancient India, JOI vol xii, 1963, June, no. 4.
4. Utpala lii. 56.
5. The SSD (ch. xi), however adds the third site plan of 100 squares.
6. BS lili. 42-54.

North

64 Square Site Plan

West

East

Śoṣa / Agni	Mukhya	Bhallāta	Soma	Bhujaga	Aditi	Diti / Dikki	
Asura	Lilāmpuda	Pṛthvidhara		Apah / Apavatsa	Jayanta		
Varuṇa	Mitra	Brahmā		Aryamā	Indra		
Kusumadanta					Sūrya		
Sugrīva	Jaya / Indra	Vivasvan		Savitā / Savitṛ	Satya		
Daurvārika / Puṣpadanta	Bhṛṅgarāja	Gandharva	Yama	Bhṛṅgakṣata	Vitatha	Pūṣā	Bhṛṅga / Antarīkṣa / Anila

South

(Antaha) and external (Bahya). The internal deities are thirteen in number and the external deities thirty-two. However, the Visnudharmottara[1] identifies these 32 gods as Naksatras and Utpala[2] combines both the stars and their presiding deities in the border of the Vastumandala.

In the second plan which is known as the 64 padas site plan[3], nine lines are drawn across and nine vertically to have 64 squares (cf. chart is enclosed). The diagonals are drawn from corner to corner. The distribution of the number of internal and external deities in this plan remain the same as in the 81 square plan.

In the Vastupurusamandala (site plan), the Vastunara has his head turned towards the north-east and face hung down. Sikhi is located on his head; Apah, on the face; Aryaman, on the breast; Apavatsa, on the chest; Prajanya, Jayanta, Indra and Surya of outer compartments, on the eye, ear, chest and right shoulder respectively; Satya, Bhrsa, Antariksa Anila, Pusan, on the arm; Savita and Savitra, on the hand; Vitatha and Brhatksata, on the side; Vivasvan, on the stomach; Yama, Gandharva, Bhrngaraja, and Mrga, on the thigh, knee, shank and buttock respectively. The above deities are

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1. pt. ii ch. xxix. 18-30.
2. Utpala lii. 73.
3. BS liii. 55-65. The VK (83-85) explaining the 64 square mandala follows Varahamihira.

situated in the parts of the right side of Vastunara. Similarly, there are deities on the left side i.e. Prthvidhara on the left breast; Diti, on the left eye; Aditi, on the left ear; Bhujaga, on the left side of the chest; Soma, on the left shoulder; Bhallata, Mukhya, Ahi, Roga and Papayaksma, on the left arm; Rudra and Rajayaksma, on the left hand, Sosa and Asura, on the left side; Varuna, on the left thigh; Kusumadanta, on the left knee; Sugriva, on the left shank; Dauvarika, on the left buttock; Sakra and Jayanta, on the genital; Brahma, on the heart and Pitr on the foot.[1]

The Vastumandala of 64 squares was strictly followed for the construction of religious buildings,[2] whereas for the construction of other buildings, such a distinction is not found in the works of Varahamihira denoting thereby that either of the two plans could be utilised for the secular architecture. In other texts the plan of 64 squares is called Manduka or Bhekapada or Ajira and that the plan of 81 squares is known by the name of Paramasayika,[3] but Varahamihira does not made any mention thereof. While commenting on the above two square plans Utpala[4] enumerates three more architectural

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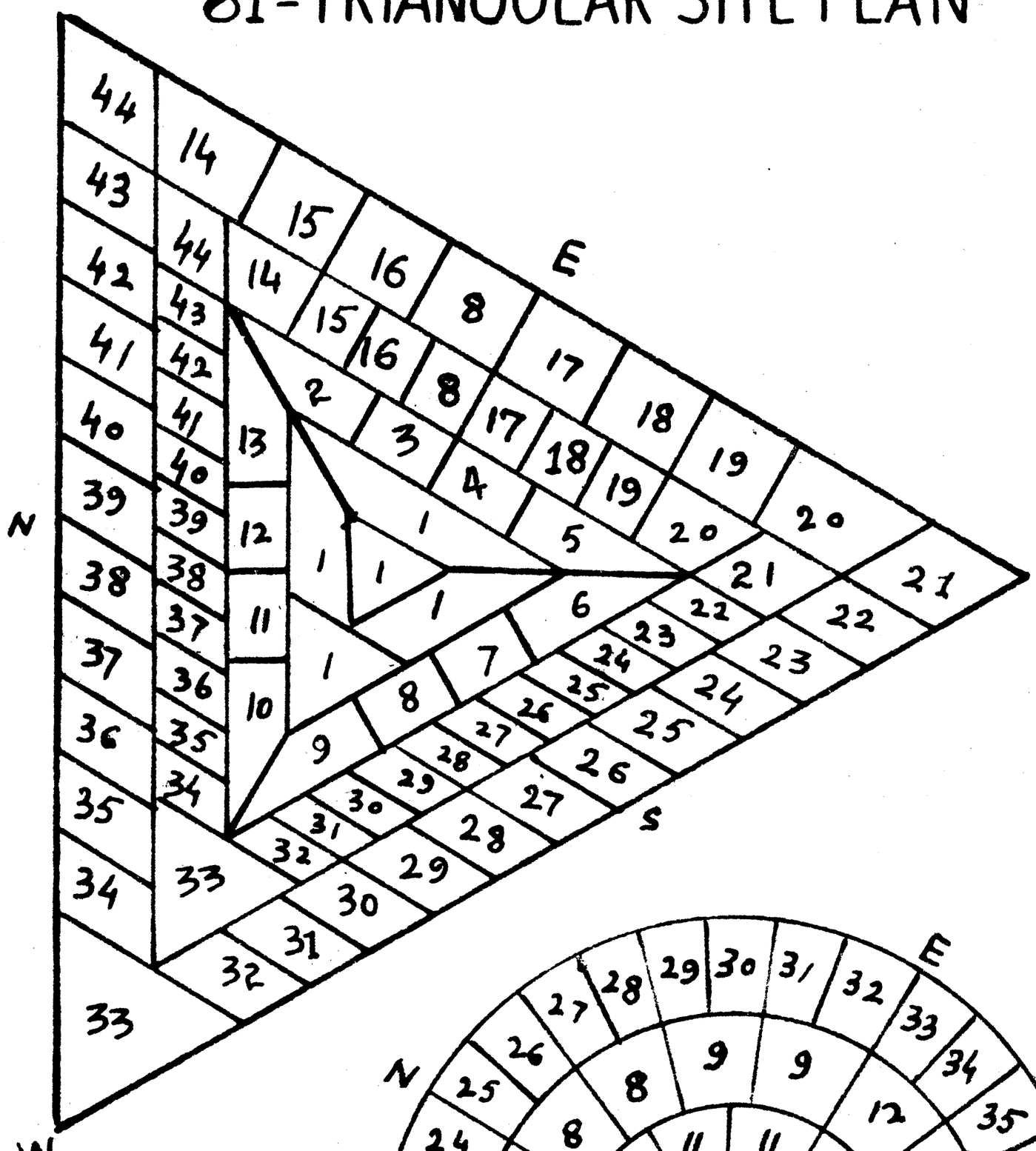
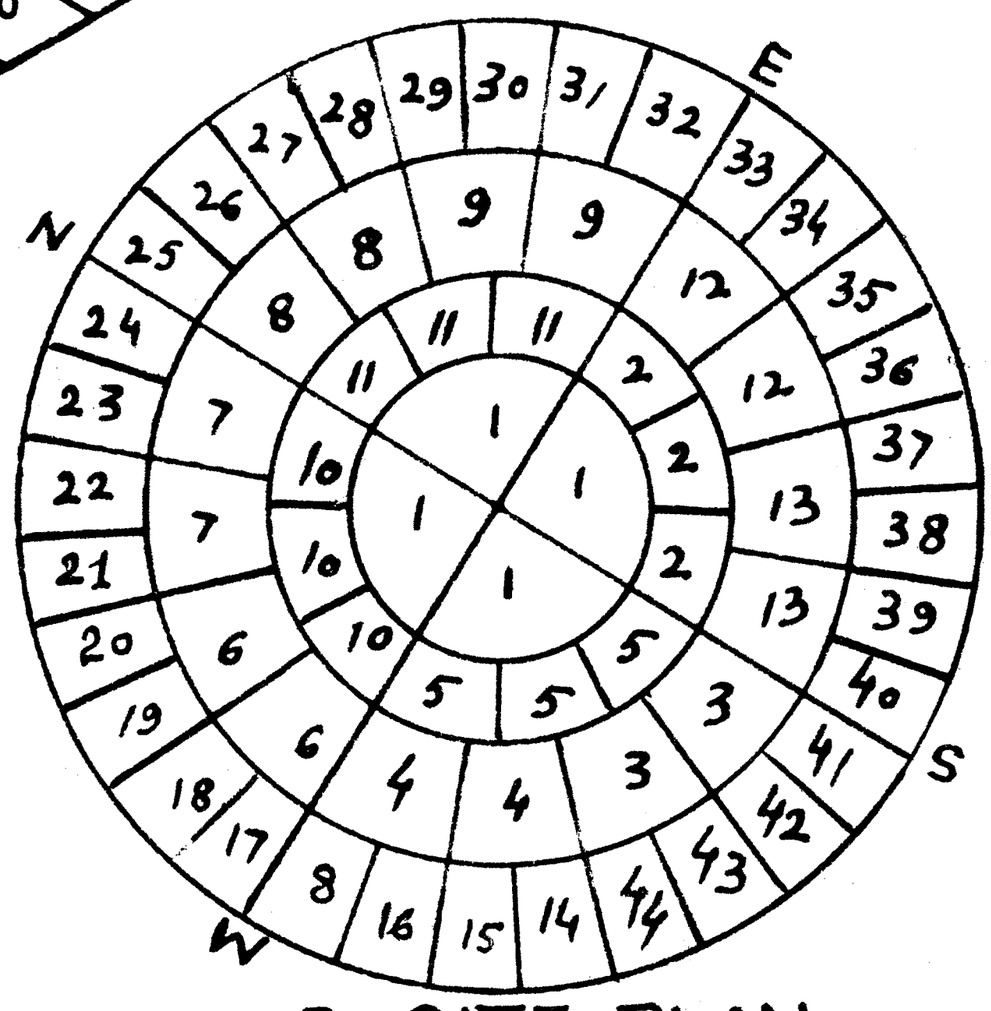
1. BS liii. 51-54.
2. Ibid. lvi. 10. cf HT p. 46.
3. Manduka in Maya vii. 57; Bhekapada - Saivabhusanam p. 140; Ajira - VD ch.ii, xxix. 35 (All these mean a frog).
4. Utpala p. 671.

81-TRIANGULAR SITE PLAN





64-CIRCULAR SITE PLAN

1. BRAHMĀ
2. APAḤ
3. APAVATSA
4. ĀRYMA
5. SAVITṚ
6. SAVITĀ
7. VIVASVAN
8. INDRA
9. MITRA
10. JAYA
11. RUDRA
12. RĀJAYAKṢMA
13. PṚITHVĪDHARA
14. ŚIKHI
15. PĀRJANYA
16. JAYANTA
17. SŪRYA
18. SATYA
19. BHṚṢA
20. ANTARIKṢA
21. ANILA
22. PŪṢĀ
23. VITATHA
24. BṚHATKṢATA
25. YAMA
26. GANDHARVA
27. BHṚṄGARĀJA
28. MṚGA
29. PITṚ
30. DAUVĀRIKA
31. SUGRĪVA
32. KUSUMADANTA
33. VARUṆA
34. ASURA
35. ŠOṢA
36. PĀPAYAKṢMĀ
37. ROGA
38. NĀGA
39. MUKHYA
40. BHALLĀTA
41. SOMA
42. BHUJAṄGA
43. ADITI
44. DITI

plans i.e., triangular of 81 divisions, circular of 81 and 64 divisions.

MARMAS[1] The Marmas or the vulnerable points have a special importance in the site-plans of Varahamihira. The intersection of the longer diagonals and the exact middle points of the squares are the Marmas.[2] Its proportionate size measures one-eighth part of a square.[3] The diagonals and the lines drawn parallel from east to west and north to south of the square have a definite measurement, proportionate to the site of the plan. The breadth of the main diagonals measures as many digits (angula) as the side length of the small square measures in cubits(hasta). The breadth of the parallel lines is one and a half times that of the diagonals.[4] The Marmas are vital parts and tender spots of the site which are not to be hurt at any cost by setting up pillars etc. on them.[5] The nine Marmas enumerated by Varahamihira are situated on the intersection of the lines connecting Roga and Anila, Pitr and Anila, Soma and Vitatha, Mukhya and Bhrsa, Jayanta and Bhrnga and Aditi and Sugriva.[6] Non-avoidance of these 'delicate spots' can lead the owner of the house to misery and other calamities.

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1. BS 1111.57. cf VD 11 ch. xxix.45-46.
2. Ibid. 64. cf HT pp. 52,85 ff.
3. Ibid. 65.
4. Ibid. 58. Utpala adds doors, walls, beams, windows etc. The SSD (xiii.10-16) gives no magnitude to the marmas. cf VD pt.11, ch. xxix.45-46.
5. Ibid. 63-64.
6. Ibid. 60 ff.

TOWN PLANNING: The towns are rectangular or square in plan according to the Brhat Samhita with four gates on four cardinal points.[1] In an earlier work like the Ramayana one finds reference to several other types of plans viz., Padmaka (resembling a lotus), Swastika and Vardhamana. More varieties of the cities have been dealt with in the later architectural texts like the Manasara[2] and the Mayamata[3] etc. It is really very intriguing that Varahamihira has summarily skipped over these points whereas he is very graphic as regards other details.

The emphasis on the social division during the age is extended to the domain of town planning as well. We find that different quarters of the town are assigned to the different caste groups. For instance the dwellings of Brahmanas, Ksatriyas, Vaisyas and Sudras are located in the northern,

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1. v.4.7-8.
2. ix.5-8. Eight types mentioned in the Manasara are: dandaka (rectangular, sarvatobhadra (square), nandya-varta (rectangular or circular), prastar (square), padmaka (circular, quadrangular, hexagonal or octagonal), swastika (of the shape of swastika), karmuka (bow-shaped) and caturmukha (square).
3. ix.33-34. A somewhat clear and relatively elaborate description of a city is found in the Milinda-panha (ch. 1 sec.34 SBE xxxvi pp. 330 ff). The description of Kancipuri in the Avantisundari of Dandin is also very elaborate.

eastern, southern and western sectors of the city respectively.[1] The Brahmanas further enjoyed the privilege of staying in any part of the town.

Varahamihira follows Kautilya in regard to the allotment of the different sectors of the city to the various castes, who locates the Ksatriyas along with the bigger merchants in the eastern horizon of the city; the Vaisyas along with the executive officials of the state, prostitutes and musicians in the southern side; the Sudras along with the ordinary artisans in the western sector; and the Brahmanas in the northern division.[2] Varahamihira goes a step further and locates the mixed tribal peoples in the corners of the city[3] whereas Kautilya places guilds and various corporations of working men in the different corners of the city. Though Varahamihira describes the architecture of the palaces and other royal buildings, he does not specifically mention the sector in which they are to be built. Kautilya, however, locates the palace in the centre of the city. That these divisions were practically followed is partially confirmed by the statement of Hiuan Tsang[4] who says that the butchers, fishermen, public performers, executioners and scavengers had to live outside the city walls.

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1. BS 1111.70.
2. AS bk 1 pp.55 ff.
3. BS 1111.83. cf. Agni ch. 106 v.1-13.
4. Watters 1. 41-47.

ARCHITECTURE OF THE TOWN

CITY GATES (Toranas): The city gates are an important part of town-planning. The settlement within the city was enclosed on all the four sides with a high wall. The entrance to the fortified city was through its four gates. The highways or the main roads starting from these gates crossed each other at the heart of the city, dividing it into four parts.[1] The Apastamba Dharma Sutra lays down the rule that the gates of the town and the palace should face the south.[2] A clear idea of the city plan, its elevation and construction along with the gates and gate-houses of ancient India can be had from the Kautilya's description of a fortified capital,[3] the bas-reliefs at Barhut, Sanchi and Bodhgaya of the second and first century B.C. and the paintings of Ajanta, Bagh, and Badami belonging to the Gupta age.

RESIDENTIAL BUILDINGS: We have discussed above the criteria for selecting a site for residential purposes. As regards the religious rites and other allied rituals connected with the commencement of the construction of the house,[4] Varahamihira's ideas are almost similar to those[5] found in the Grhasutras, the Manu Samhita, and the Puranas.[6]

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1. AS bk i. pp. 55 ff.
2. ii. 10.25.2.
3. Artha ii.3.
4. BS liii. 98-104.
5. Manu iv. 124. cf Garga, Utpala pp. 696-97.
6. Mat cclii. 17-20.

MEASUREMENTS OF BUILDINGS

	House Type	No. of houses	Area of Occupation in cubits			Remarks
			H	L	H	
RESIDENTIAL BUILDINGS:	King	5	108	135	100	
			100	125	100	
			92	115	92	cf. Mat cclix.14-16.
			84	105	84	
			76	95	76	
	Yuvaraja	5	80	107	80	
			74	99	74	
			68	91	68	
			62	83	62	
			56	75	56	
	Commander-in-chief	5	64	75	64	cf. Mat cclix.18-19.
			58	68	58	
			52	61	52	
			46	54	46	
			40	47	40	
	Minister	5	60	68	60	cf. Mat cclix.20-21.
			56	63	56	
			52	58	52	
			48	54	48	
			44	49	44	
	Younger Princes	5	40	47	40	cf Mat cclix.17-18.
			37	43	37	
			34	39	34	
			31	36	31	
			28	32	28	

According to Varahamihira[1], the Silanyasa i.e., foundation stone laying ceremony marks the actual commencement of the construction of the house, which is laid in the north eastern corner of the site plan and is repeated in the rest of the corners in the clockwise direction. Simultaneously are raised the doors and the pillars being decked with umbrellas, wreaths, cloths, incense and ointments.[2]

Varahamihira deals in considerable detail with the various types of houses[3] /every class of people in the / for society including the high-ups like the king, ministers, commander-in-chief and the lowly like the scavengers and the tribals. The houses have grades as according to the social status of the occupant. The criteria laid down for grading being the situation of the house in a particular part of the city, the area occupied by it and the dimensions and number of rooms contained therein. The description of various types of houses conforming to the above division is given in the chart on the opposite page.

Most of the buildings, described by Varahamihira, are situated in the so-called palace premises which include the residential quarters of the king, and his kinsmen together with all the regal establishments. Varahamihira's planning of the royal palaces seems to be based on " a code of stereotyped canons, meticulously adhered to, right from the age of the Epics down to the palaces of Mughal Emperors like Akbar and Shahjahan"[4].

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1. BS lii. 112-13.
2. Ibid.
3. Ibid. liii.4-7, 15.
4. HC A Study app. i.

The palace used by the king was called raja-prasada, raja-bhavana, raja-nivesana, ranno-nivesa etc., in the different texts of sanskrit and Pali. The house of the king is referred to by Varahamihira as Nrpagrha[1]. From the other texts we find that palaces were provided with a number of apartments and other constituents, as for example, inner apartment or bed room (garbha, sayana-garbha, Pali Sayana-gabbha), drawing room (avasthana-grha), annexe (upatthana), audience hall (preksaka), meditation chamber (jhanagan), magic house (patima geha), cells (guha), sleeping room (mohana), toilet room (prasadhana), dressing room (pattasala), latticed room (jala), flower room (kusuma), painting room (citra-sala), music hall (gandharva), minor hall (adarsa-sala), bathroom (snaijana), pleasure bower (alika ghara)[2]. The palaces in their elevational aspects consisted of : Pada, Jama, Bahu, Griva, Nasika, Lalata, and Sirah[3]. The description of the principal palaces (vimana-mukhyah) of Indra (Indra-samjnaka) in the Varangacarita, (7th century A.D.) gives a compact picture of palace architecture[4].

A general prescription for the construction of the houses of state officials laid down was in accordance with their caste. Their houses were equal to the difference between those of the houses of the Commander-in-chief and those prescribed for their respective caste, for instance,

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1. BS liii.4.
2. For details see Ray, Amita - Village, Towns and Secular Buildings in Ancient India.
3. JOI vol xiii, 1964 no.4 p. 335.
4. Ibid. vol xiv. no.1 p. 28.

if an officer belongs to the Brahmana caste, the measurements should be equal to the difference between the house of the Senapati and an ordinary Brahmana's house[1] and likewise in the case of a Ksatriya's house and so forth.

PUBLIC BUILDINGS: Of the public buildings whose account is given in the chart referred to above, the elephant-yards have been exhaustively treated by Varahamihira who states that they[2] should be constructed in the southern part of the royal palace. The general plan of the yard consisted of three apartments. The height of the main gate was to be equal to that of the elephant and its width short by two cubits. The doors of the gates should be decorated carefully by depicting various patterns of the lotuses, blue lotuses, pair of swans and females, with foliage, birds and pitchers and trees of different kinds having parrots and bees and bent down with the weight of fruit, sprouts and flowers, together with the figures of reptiles, elephants, fish, tigers, roots[3], lotus-fibre, creepers and aquatic animals such as crocodiles etc. Proper care about the ventilation[4] was also kept in mind. Trees of various kinds should also be grown in the yards for they give strength to the elephants. The thickness[5] of the tying posts should exceed a little over a cubit. From the above description it seems that Varahamihira has given due importance to the

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1. BS 1111.14. cf Mat ccliv.21.
2. YY x.15.
3. Ibid. 24-25.
4. Ibid. 23. The list includes the Sandal, Arjuna, Srisa, Madhupa, Deodara, Sarala, Black Sala, Rohini, Khadira, Campaka, Kadamba and Asoka trees.
5. Ibid. 22.

animals which enjoyed religious sanctity during the period under review. It also appears that he was fully aware of the tender emotions of such sensitive animals and wanted them to be kept in their proper and pleasing surroundings.

In Bana's Harsa Carita[1] and Kadambari[2] we find a beautiful description of Vasa-Grha (Pleasure-house). In an Ajanta fresco[3] a newly married couple is shown celebrating their honeymoon, possibly in the Vasa-Grha.

SALA HOUSES[4]: The general plan of the residential structure according to Varahamihira, consisted of a courtyard surrounded by chambers(sala) on one (eka sala), two (dvisala), three(trisala) and four sides (catursala). It is a very common plan followed in India[5] since the times of the Harappan culture. Kalidasa supplements this view by giving an exact outlay of the house of the Gupta period. Catursalaka houses were

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1. A Cultural Study (Hindi) pp. 64,85,95, 208.
2. A Study (Hindi) pp. 74,81.
3. Ajanta Paintings (Lalit Kala Akademi) 1956 pl. xx.
4. BS lii. 37-41. cf Utpala pp. 659-60; Mat cclix.1-6,11; Kasika xxxv.38; Dictionary pp. 624-25.
5. Mala pp. 63-64; Raghu i.50,52; vi.24,43,56; vii.5-9, 11; xiii.21,40; xiv.13; xix.2,7,42; Vikrama ii.22; Kumara viii.38. cf Amarakosa ii.2. 10-11; Mrechakatika Act. iii; JOI vol 13, no.4 pp. 332 ff; ASWI iv. p.99; Nasik no. 5, l.1.

considered to be the best. The classification of sala houses is given as under:

CLASSIFICATION OF SALA HOUSES

Ekasalaka	Dvisalaka		Trisalaka		Catursalaka
	Siddhartha	(W+S)	Hiranyanabha	(W+S+E)	Sarvatobhadra
	Yamasurya	(W+N)	Suksetra	(N+W+S)	Nandyavarta
	Vata	(S+E)	Culli	(E+N+W)	Vardhamana
	Grhaculli	(E+W)	Paksaghna	(E+N+S)	Swastika
	Kaca	(S+N)	...		Rucaka
	Danda	(N+E)			

E= Eastern,
W= Western,
N= Northern,
S= Southern

SALA AND ALINDA: Varahamihira gives in detail the proportionate measurements of various parts of the structure. To get the measurement of the hall (Sala) and verandah(Alinda) for the house of the commander-in-chief and the king, was to add 70 to their breadth and place the sum separately and divide one by 14 and the other by 35, thus the two quotients derived give the breadth for the hall and verandah respectively.[1] The dimensions of the halls of the four castes would be 4 cubits 17 digits; 4 cubits 3 digits; 3 cubits 15 digits; and 3 cubits 13 digits; respectively of the Brahmanas, Ksatriyas, Vaisyas

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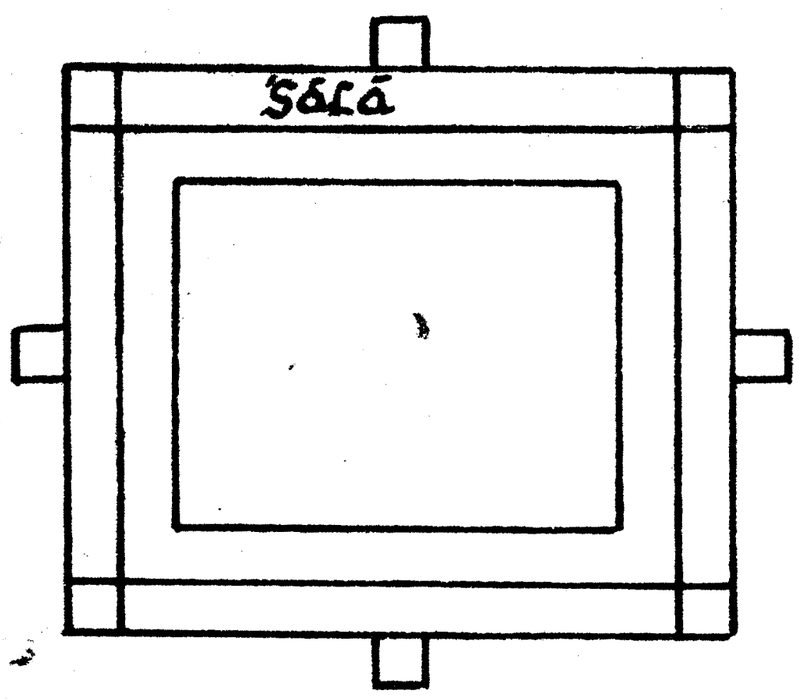
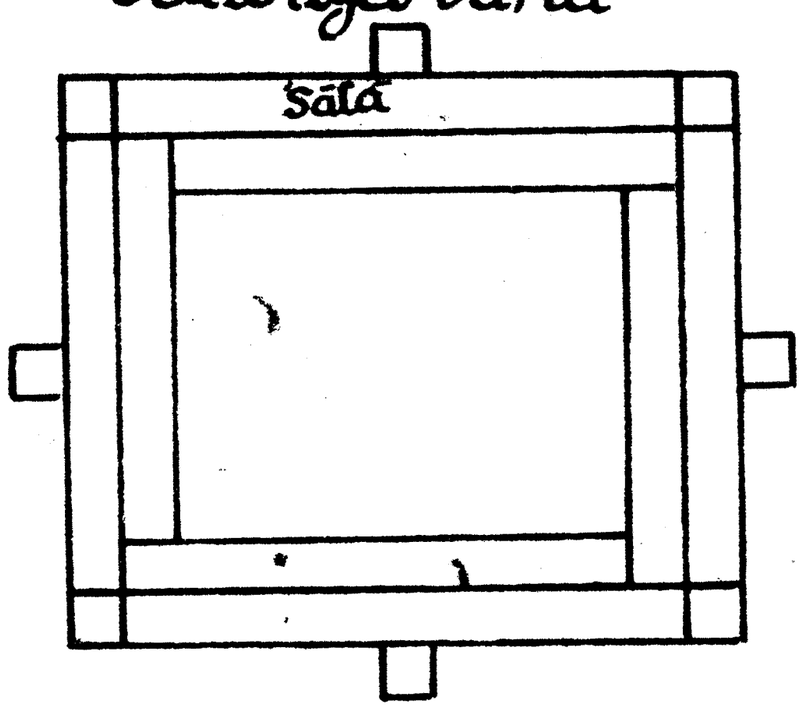
1. BS liii. 17.

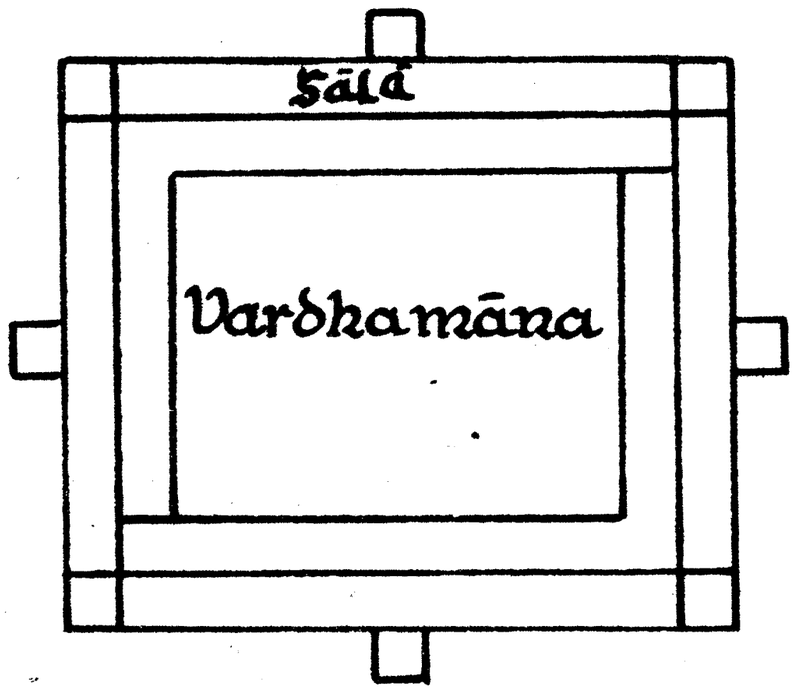
Śālā Plan

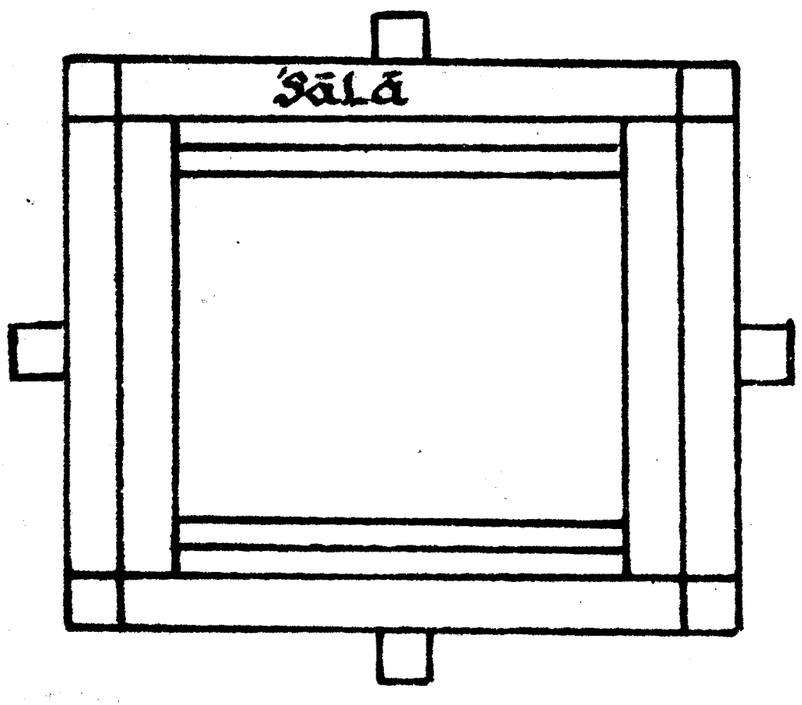
Sarvatobhadra



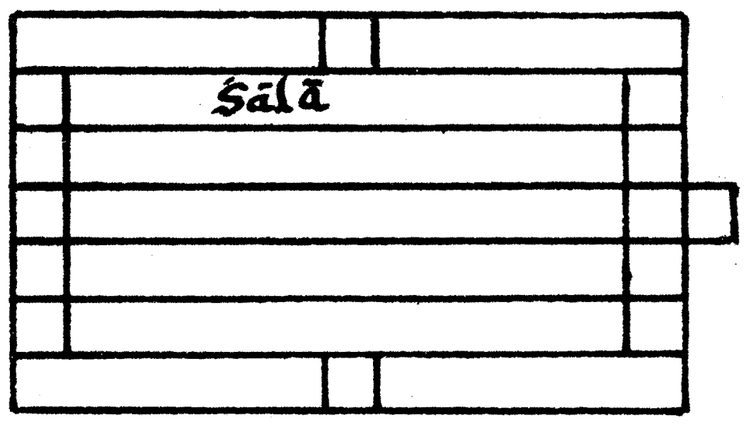
Vandhyā varta







Swāstika



Rucaka

and Sudras of their houses measuring 32, 28,24 and 20 cubits. The verandahs of the above structure measure in order, 3 cubits 19 digits; 3 cubit 8 digits; 2 cubits 20 digits; 2 cubits 18 digits; and 2 cubits 3 digits.[1]

The classification of the houses is further based on the type of verandah.[2] It is of five kinds viz., Sarvatobhadra, which has an unbroken verandah all round the house and has four doors; Nandyavarta has verandahs starting from the wall of the hall to the end from left to right and has three entrance gates leaving off the western one; Vardhamana has a front verandah extending from the left hall to the right hall and another verandah is made thence from left to right and still another beautiful one from there in the same manner, without having the southern entrance door; Swastika's western verandah extends from left hall to the right hall, the other two verandahs (southern and northern) start from the above touch and end in the east and a fourth one (eastern) is held between them and has only one entrance from the eastern side; and the Rucaka type consists of two verandahs touching the ends and it has two more, one in the east and the other in the west, touching each other internally and has no entrance gates on the northern side (Diagrams attached).

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1. BS 1111.18-19.
2. Ibid. 31-35. cf Utpala pp. 656-658.

FOOT-PATH (Vithika): The path leading from the street to the main building was called Vithika. The general rule[1] laid down in regard to its width was a third of the hall. The location of the Vithika formed a basis of the classification[2] of houses. Thus if the Vithika lies in front (i.e., to the east) of the house, the structure is called Sosnisa i.e., one with a turban; Sayasraya, if the Vithika lies behind (i.e., to the west) the house; Savastambha, if it is on the sides; and Susthita, if it is all round.

GENERAL ARCHITECTURAL PRINCIPLES FOR BUILDINGS

STOREYS (Bhumis): The height of the first storey should be a sixteenth of the width of the building with an addition of four cubits. The height of the each successive upper storey is to be decreased by one-twelfth of the preceding one.[3] Thus the height of the ground floor of the king's house would be 10 cubits 18 digits.[4] According to Hiranyagarbha, the king's house has 8½ storeys; Brahmana's,7½; Ksatriya's,6½; Vaisya's, 5½; and Sudra's, 3½.

WALLS (Bhittis): The thickness of the walls of all the houses made of burnt bricks was to be a sixteenth part of their breadth.[5] But in case of the houses made of wood there was no

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1. BS lili.20.
2. Ibid. 20-21. cf Mat ccliv.37; Utpala p. 651.
3. Ibid. 22.
4. Utpala p. 650.
5. BS lili.23. cf Garga, Utpala p. 652; VP ii.61.

restriction. Thus the royal wall would be six cubits
1
18 digits in width.

DOORS (Dvara): The door was the main important part of the house. It was placed generally in the middle of the front wall and faced a cardinal and never an intermediate direction. The height of the main door was ascertained by increasing the width of the houses of kings, commanders and others by an
which
eleventh and adding 70/will give the height of the doors in
2
digits and a half of that their width. In the case of the houses of the Brahmanas, the number denoting the breadth in cubits should be taken as that of digits and increased by 18 and added an eighth part of itself, which will give the width
3
of the door and the thrice this will be its height.

The principal door ought to be superior in structure and design. It must not be out done by any of the side doors. It should be decorated with auspicious figures. The size of the door should be in accordance with the measurement of the house - it should neither be too broad nor too short or stooping or narrow and must be situated at a distance from a road, tree, corner, well, pillar, and water sluice. Varahamihira has enumerated many effects regarding the location of the door in different compartments of the plans of 81 and
4
64 squares, and also other beliefs prevalent among the people

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1. The bricks used at Bhita measure 18½"x9"x2½" and 21"x10½x 2½". JRAS 1911 p. 140.
2. BS 1111.24. cf Utpala p. 653.
3. Ibid. 25.
4. Ibid. 71 ff. cf Samasa, Utpala pp. 678-79. Gobhila Grha Sutra iv.7.14-17; Kathaka grhasutra 11.1; Apastamba Dharmasutra 11.10.25.2.

of his time.[1] Various parts of the door were governed by the respective stars known as Dvara Nakstrani[2] which are said to be eight in number. Each has its own asterism. The doors should be constructed by the agreement of the moon and stars.[3]

THRESHOLD AND DOOR-JAMBS (Udumbara): The thickness of the two side-frames of the door is as many digits as the height of the door in cubits. One and a half times of the side-frames is equal to the thickness of the threshold and the upper block. The breadth of all the four pieces is an eightieth part of seven times the door's height.[4] T. Bhattacharya points out that the natural depth of the lintel ought to be the same as that of the jamb, otherwise the frame cannot be well joined.[5]

COLUMNS (Stambha):[6] Five different pillars explained by Varahamihira are: Rucaka which is perfectly square in the middle (leaving off the two ends); Vajra, octagonal; Dvivajra, sixteen-sided; Pralinaka, 32 sided; and Vrtta, round. A column was divided into nine equal components,[7] the first two parts belonging to the bottom and last two to the top. The lowest part is called Vahana (support); the second, Ghata (pot); the eighth, Padma (Lotus); and the topmost, Uttarostha

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1. BS liii.76 ff. cf Mat cclv.10-18.
2. Utpala p. 681. cf Mat cclv.18-19.
3. Ibid. pp. 680-81.
4. BS liii.26-27. cf Mat ccliv.42-43. Utpala (p.654) informs us that the threshold and upper block were commonly known as 'dehali' and 'nitala' respectively.
5. Study on Vastuvidya p. 237.
6. BS liii.28. cf Utpala p. 655; Mat cclv.2-3.
7. Ibid. 29. According to Utpala (p.655) Uttarostha forming the eighth part and Padma the ninth were carved with various decorative figures and that the lower parts sometimes worked in gold. cf Dictionary p.650; Architecture pp. 126-27.

(Upper Lip). Designs and artistic figures could also be carved in the top and the bottom portions. The proportionate dimensions and mouldings of columns are also given. An eightieth part of nine times the height of a storey denotes the width of a pillar at the bottom; and the same lessened by a tenth is its width at the top. Thus a pillar at the ground floor in a king's house will have a width of 1 cubit 5 digits at the bottom and about 1 cubit 2 digits at the top. Its circumference is thrice the width.[1]

Monolithic pillars supporting the building structure were excavated at Pataliputra which belong to the times of the Mauryas.[2] There were also free standing columns of Asoka which were utilised for the propagation of his religious motives. The main characteristics of these two types of Mauryan pillars are: Firstly they are circular and slightly tapering, secondly they are without any ornamentation, however, the free standing pillars are crowned by a capital. The Besanagar Garuda Pillar of Heliodorus, belonging to the middle of the second century B.C. shows, for the first time, the signs of ornamentation. The lower part of the pillar is octagonal and the upper 16 sided with a band of 32 facets above. The pillars at Bedsa and Karle caves belonging to the second century B.C. are also embellished and many-sided.[3] Thus we find that an entirely different technique which marks a clear departure from the earlier one, is used by the architects of the second century

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1. BS 1111.37. cf Mat colv. 1-2.
2. Ibid.
3. Cf. Brown, P., Indian Architecture i, plates xxiv, xxix and xlii.

[illegible]. The columns, free standing as well as used in the building superstructures, are ornamented and multisided instead of circular and plain of the times of the Mauryans. The same tendenc y seems to have been followed in the rock-cut shrines of Ajanta and Ellora and other places in the Gupta and post-Gupta times.

BEAMS (Bharatula): The beams are placed over the columns to support the roof. Bharatula seems to be the chief beam whose thickness was said to be equal to that of the pillar beneath it. The number of such chief beams depended on the weight-carrying capacity of the building. There were also minor beams (or architrave or cross beams) known as Tulopatula, the thickness of which is lessened by a quarter of the immediately preceding one.[1]

Besides the proportionate measurements of individual houses noticed above, it is laid down that it is inauspicious for all to tamper with the given measurements.[2]

After giving the general ground plan of the various types of houses, and their proportionate measurements, Varahamihira[3] also refers to the different apartments of the building. According to him the Devagrha i.e., the

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1. BS liii.30.
   According to another interpretation quoted by Utpala (p.656), cross beams were known as Upa-tula and above these were placed minor beams called Tulopatula and their thickness was lessened by a quarter of the immediately preceding one. T.Bhattacharya, however, regards Bharatula, Tula and Upatula as moulding of pillars(Study on Vastu-Vidya, pp. 202-4). Similarly Acharya (Indian Architecture, p. 126-27) takes Bahulya to denote moulding. Kern translates these terms as architrave, superior cross beams and upper rafters. cf Mat cclv. 5-6.
2. BS liii.15.
3. Ibid. 118. cf. Rigveda vii.85-86; Mahavagga iii.5,6,9.

family shrine should be situated in north east; Kitchen in the south east, the store room in the south west; and the treasury and granary in the north west.

GRHA-PRAVESA: On the occasion of the first entrance to the newly constructed house, it is decorated with abundance of flowers decked with arches and embellished with pots filled with water. The deities are again worshipped with incense, perfumes and oblations. The ceremony is performed amidst the sound of the Brahmanas' chanting the Vedas.[1]

It is only after this ceremony that the occupants of new house move in after due honour to the god of the house and other deities associated with it as mentioned in the house plans. Such rites and rituals are a part and parcel of Brahmanical culture and have been in vogue in India already since the times represented in the Vedic literature. Such practices were intended to propitiate the evil spirits that were supposed to haunt a site selected for the building of dwelling.

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1. BS 1111.125. cf Utpala p. 705. A hymn addressed to Vastoshpati, in the Atharvaveda (111.3,5,7) reads:

" A supporter art thou, oh house, with broad roof containing purified grain. To thee may the calf come, to thee the child, to thee the milch cow.... Oh mistress of dwelling, clothed in grass, be thou kindly disposed, give us moreover wealth along with heroes ... hitherto this house hath come the tender child, hither the calf along with the other domestic animals, hither the vessel full of liquor, together with bowls of sour milk".

SECTION II

TEMPLE ARCHITECTURE (Prasada Laksana)

With the revival of Brahmanism during the Guptas, the religious architecture of India emerges into a new and more elaborate phase. Along with the growth of religious consciousness in the society, the Hindu philosophy had vastly expanded its sphere of thought. Temple, being the abode of god, now came to be regarded as the Universe itself. Therefore, the contemporary Indian mind had conceived of a temple in accordance with its spiritual outlook. The Hindu temple, thus, displays through its various parts, links between the mortals and the divine - the lofty spire expressive of worldly urge to reach the Ultimate; its massiveness, a symbol of spiritual strength.

This conception of the temple is reflected in the works of Varahamihira who seems to have taken special care in giving scientific and precise details not only of its every part but also every phase of its construction. To Varahamihira[1] Prasada, meant a temple and he is very particular about the use of this term in this context. It is used in the same sense in the Matsya Purana[2], Amara Kosa[3], and in the various epigraphs for example the Eran Inscription of the time of Toramana[4], Mandasor Inscription of Kumaragupta and

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1. BS ii.18; xlv.4; xlvi.20; lvi.19,31; lvii.4; lxxxvi.17; lxxxix.6; xcv.5,34.
2. chs. cclxix-cclxx.
3. ii.2.9.
4. CII iii. p. 160.

Bandhuvarman,[1] Gwaliar Inscription of Mihirakula,[2] Bodhgaya Inscription of Mahanaman[3] and in the texts of Manasara,[4] Mayamata,[5] and the Samaranganasutradhara.[6] He further uses this term for the ancillary shrines and accessories of the temple, as well. The other terms used to denote the temple are Devatayatana,[7] Devatalaya,[8] Arcayatana,[9] Ayatana,[10] Devakula,[11] Devanamalaya,[12] Bhavedya,[13] Devagara,[14] Suralaya,[15] Devagrha,[16] Surabhavana,[17] and Vibudhabhavana.[18] But peculiarly enough the most well-known term 'Vimana' is nowhere used by him in this context. He, however, mentions it only as one of the types of temples.[19] The word 'Mandira' no doubt occurs in different works of Varahamihira but it denotes a residential building and not a temple, the abode of god. The other terms such as Harmya, Bhavana, Vesma, Ksetra etc., as referred to by Varahamihira carry a different meaning.

The various terms occuring in the texts of Mayamata,[20]

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1. CII iii. p. 81.
2. Ibid. p. 162.
3. Ibid. p. 276.
4. xix. 108.
5. xix. 10.
6. ch. xviii.
7. BS lxi. 1,9,10.
8. Ibid. xliii.13.
9. Ibid. xlvi.8.
10. Ibid. xlvii.15.
11. Ibid. liii. 89.
12. Ibid. lvi.2.
13. Ibid. lvi. 11.
14. Ibid. lviii.3.
15. Ibid. lix.2.
16. Ibid. liii.118.
17. Ibid. lxxix.4.
18. Ibid. civ.62.
19. In BS iv.2, it denotes a room or house, in BS lxxxix.8, it is used in the sense of a house, similarly in the BJ v.13,19 and xxv.4 it denotes a house. Also occurs in PS xii.36 and YY ii.5 in the same sense.
20. The Mayamata (xix.10-12) mentions the following 25 names: Vimana, Bhavana, Harmya, Saudha, Dhama, Niketana, Prasada, Sadanam, Padma, Geha, Avasaka, Grha, Alaya, Nilaya, Vasa, Aspada, Vastu, Vastuka, Ksetra, Ayatana, Vesma, Mandira, Dhisnyaka, Pada, Laya.

Manasara[1] and Samaranganasutradhara[2] are hardly in consonance with the terms of Varahamihira.

OBJECT: There is a general consensus of opinion among all the authors of the temple architecture that the temples were constructed for the sake of increasing the religious merit. During our period also the religious motivation contributed to the raising of temples as is evident from a quotation of Varahamihira who states, " let him who wishes to enter the worlds that are reached by sacrificial offerings and the performance of religious obligations (Istapurta) build a temple to the gods, by which he attains both the results of sacrifice and the performance of religious obligations"[3]. Utpala[4] further clarifies the statement by adding that sacrificial fire offerings are called 'Ista' and all other offerings are 'Purta'. The latter include the

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1. The Manasara (xix.108-12) mentions the following 24 names: Vimana, Samalayam, Harmya, Alaya, Adhisnyaka, Prasada, Bhavana, Ksetra, Mandira, Ayatana, Vesma, Grha, Avasa, Ksaya, Dhama, Vasa, Geha, Agara, Sadana, Vasita, Nilaya, Tala, Kostha, Sthana.
2. The Samaranganasutradhara (xviii.8,9) mentions the following 22 names: Avasa, Sadana, Neketa, Mandira, Sansthana, Nidhana, Dhisnya, Bhavana, Vasati, Ksaya, Agara, Samsraya, Nida, Geha, Sarana, Alaya, Nilaya, Layana, Vesma, Grha, Oka, Pratisraya.
   The various terms denoting a temple as occuring in the texts of Mayamata, Manasara and Samaranganasutradhara except the two viz. Prasada and Ayatana, are hardly in consonance with those of Varahamihira. In the earlier phase, while Varahamihira differentiates the terms denoting a temple from other types of buildings, the Silpa-sastras in the later ages include all these terms to denote a temple.
   The list advanced by Kramrisch (HT pp. 137-38) includes at least six terms mentioned by Varahamihira viz., Devagrha, Devagara, Devakula, Devatayatana, Devalaya, and Devatagara. The other terms enumerated by her are Mandira, Bhavana, Sthana, Vesma, Kirtana, Harmya, Vihara, Caitya and Ksetra. A few of these terms that are mentioned by Varahamihira denote a different meaning. They however, tally with the account of the later Silpa-sastras except Vihara and Caitya which can be found in the Buddhist and Jain terminology. The term Devakula was very popular in the inscriptions of the Kusanas.
3. BS lvi.1,2. cf Kasyapa Utpala p. 754. 4. p. 753.

construction of tanks, wells and houses of the gods. The sacrificial offerings secure for the sacrificer a place in heaven according to the merit of his sacrifice. The Yajamana, the sacrificer, is the donor of the temple; his sacramental person, transformed by his sacrificial and other offerings is transferred to heaven. The duration of his stay there which is secured by the enduring nature of the shrine is permanent. The religious motives to the construction of the temples are also significantly repeated in the Puranas[1] as well as in the contemporary epigraphical[2] records. For instance, Damodar copper-plate of Buddhagupta[3] (undated) records the purchase of land for building temples for the sake of increasing the religious merit and the same motive is revealed by the Gadhwa stone inscription[4] (148 G.E.) in the raising of temples.

SELECTION OF SITE: Big water tanks and well-laid out gardens are the primary factors in the building of a temple, according

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1. The Agni Purana (ch. xxxviii, 10-11, 25-26) states "having got wealth by luck or exertion one should give it in the proper way to the best among the twice-born and cause temples to be constructed". Further that a poor man building the smallest shrine reaps the same benefit which a rich man does by building the largest temple. The Markandeya Purana (ch. 93.1-6) emphasizes the importance of building temples, particularly in the Kali age. Vismudharmottara (ch. 1. 11) states, " to build a temple is meritorious; so is the making of an image of a deity. Meritorious is the worship of a divine image and so is its adoration".
2. CII iii, p. 162.
3. Ibid.
4. Ibid. 268.

to Varahamihira.[1] Usually almost all the extant temples have water tanks as their standing feature, but most of the temples do not fulfil the second condition. If, however, the water is neither available by nature nor by artifice it is present symbolically at the consecration of temple or image.[2] The temples of Orissa viz., Bhuvanesvara, Puri and Konaraka are all provided with tanks and the rock-cut Viharas of western India lie in the oneness of nature, with beautiful natural surroundings. In short, the temples should be built in the vicinity of forests, rivers, mountains and cataracts and if built in towns these should be provided with pleasure gardens.[3] These places are considered pure because the gods sport in such places.[4]

SOIL: The several sorts of soil recommended for the construction of temples for the different castes are similar to those recommended to persons of the different classes for

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1. "The gods always play where the lakes are, where the sun's rays are warded off by umbrellas of lotusleaf clusters, and where clear waterpaths are made by swans whose breasts toss the white lotuses hither and thither; where swans, ducks, curleys and paddy-birds are heard and animals rest nearby in the shade of the Nicula trees on the river banks.
   "The gods always play where the rivers have for their bracelets the sound of the flight of curleys and the voice of swans for their speech, water as their garment, carps for their zone, the flowering trees on their banks as earrings, the confluence of rivers as their hips, raised sand banks as breasts and the plumage of swans their mantle.
   "The gods always play where the groves are near, rivers, mountains and springs and in towns with pleasure gardens." It is in such blissful heavenly like surroundings that the great spirits 'take pleasure in residing in places which are furnished with plenty of water and gardens natural or otherwise'. (BS lvi. 1,3-8.)
2. HT pp. 5-6.
3. BS lvi.8. The Varangacarita (xxii.69-71) refers to the Bahyodyana or the outer gardens in the out-space of the temples in which there were water-ponds beautified by

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building houses.[1] For instance a Brahmana wishing to construct a temple must choose white soil; Ksatriyas, red; Vaisyas, yellow; and Sudras, black. Other qualities of the soil must also be taken into consideration, for instance, if it smells like Ghee, blood, food and liquor, it is auspicious for the four classes respectively. Similarly it is auspicious for these classes in their order if it is covered with Kusa, Sara, Durva and Kasa (different types of grasses).[2] Likewise, a sweet, astringent, sour and pungent earth bestows prosperity on the classes respectively.[3]

GROUND PLAN: The ground plan for the construction of the temple recommended by Varahamihira is that of sixty-four Vastupurusamandala.[4] The presiding deities constituting the Vastupurusamandala were worshipped throughout the different stages of construction with various offerings.[5] This division of site was not the innovation of astrologers but was actually followed by architects as accepted by the archaeologists. The terrace over the basement of the Gupta temple at Deogadh was

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groves of several kinds of trees.

2. Ibid. Bhavisya Purana states, (cxxx.11-15; VD ch.93) "Play is the modality in which the supreme spirit displays his presence in the world... They have beauty; for it is there that the celestial intelligence - the gods, intermediate between the Lord and man, - has its sport and display". Coomaraswamy, Journal of the American Society, 1941, pp. 98-100 explains (Brahmasutra,ii.1.32-33) "Brahma's crea-tive activity is not undertaken by way of any need on his part, but simply by way of sport, in the common sense of the word".

1. BS lvi.9.
2. Ibid. liii.96-97.
3. Ibid. lvi. 10.
4. Ibid.
5. Mat ch. ccixviii..

divided into nine equal squares, the central one being occupied by the Garbhagrha.[1] It may be pointed out here that it is not in agreement with the 64 square plan as suggested by Varahamihira but with that of 81 square plan which according to him is more suitable for residential sites.

HEIGHT OF TEMPLE: The total height of a temple should be double its width though a residential house was required to be equal in height and width.[2] The terrace above the basement known as Kati[3] over which the edifice is to be built should one-third of the height of the temple.[4] This rule appears to have been followed in some of the extant temples.[5] The relative proportions between the width and the height are approximately applicable to the Dasavatara temple at Deogadh which is a plain square 18' 6" x 18' 6".[6] Its height when built could not have been less than 40 feet.[7] Among the other temples, Meru and Nandana have the greatest height i.e., 64 cubits or 96 feet. According to a later text Isanasivagurudevapaddhati,[8] the height of a building was not to exceed 100 cubits.

HEIGHT OF STOREY (Bhumi): There was no unanimity among the architects with regard to the height of the storey as furnished

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1. CASR vol x p. 105. cf MASI no. 70 p.5 pl.ii.
2. BS lvi.11.
3. Ibid. liii.11.
4. Ibid. lvi.11. cf Utpala p. 757.
5. Ibid. cf VD iii lxxxvi.4.
6. MASI no. 70 p.6.
7. Brown, P., Indian Architecture, p. 60.
8. iii ch. xxx.32.

by Varahamihira who states that according to Maya, the height of a storey is 108 digits, whereas Visvakarma recommends it to be 84 digits.[1] As to this divergence of opinion it may be suggested that there were two distinctive schools of architecture during the time of Varahamihira which may be called the precursors of later Nagara and Dravida schools. Visvakarma, who is deified in the Puranic texts, was the chief architect and great exponent of the Nagara school and Maya was that of the Dravida school. Varahamihira who seems to have had a thorough study of the works of both these exponents and who was a resident of Avanti, a meeting place of the cultures of North and South India; has been a blending force between the two different traditions. Varahamihira gives an unbiased account of the traditions prevalent during his time without making regional or ethnical distinctions. He reconciles very aptly the above two different schools by the remarks that if we add the height of the crown work called Kapotapali, the smaller number will equal the greater.[2] According to Utpala,[3] Kapotapali denotes lion faces

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1. BS lvi. 29, The height of a storey, however, is different in the secular buildings. According to this, the height of the ground floor of the King's house would come to 10 cubits and 18 digits. The number of the storeys credited to Meru is 12 and its height is 64 cubits or 96 feet and the height of the first storey is 4½ cubits or 3½ cubits. Similarly the number of the storeys of the Nandana is six whereas its height is the same as that of the Meru.
2. Ibid. 30.
3. p. 765.

made of wood jutting out.

GARBHAGRHA: The most sacred place in a temple is the Garbhagrha, which houses the image of the presiding deity of the temple and over which rises the mounting Sikhara.[1] The measurements of the sanctum sanctorum (Garbhagrha) are as follows:[2] The breadth of the Garbhagrha was half of the external width of the temple. The garbhagrha of the Meru would be 16 cubits. It was further surrounded by a thick wall all round,[3] to which Utpala adds[4] that a circumambulatory path should be left between the garbhagrha and the wall. The square sanctum of the Deogadh temple[5] which internally measures 9' 9" and externally 18' 6", is very near to the dimensions mentioned above. Another temple which fulfils these conditions is the Mundesvari temple which measures 40' in external diameter while the internal diameter of the garbhagrha is

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1. Kramarisch points out that "the form of the Garbhagrha is based on a square. The Romans called 'templum' a square fenced off for augury. It is enclosed for the purpose of ultimate realisation. Its sacredness is protected from the evil influence of external distractions and the destructive agents of time and accidents. Garbha which signifies the womb as well as the embyro in the microcosmic sense, denotes Prakrti, primordial Substance, in its macrocosmic application" (HT p. 163).
2. Ibid.
3. BS lvi.12. cf VR ch. 88, 3 ff; Kasyapa, Utpala p. 759.
4. p. 757.
5. MASI no. 70 p. 6.

exactly 20 feet, the wall being 10 feet thick.[1]

The doorway of the Garbhagrha measures one-fourth of its breadth and twice the breadth in height.[2] The measurements of the doorway leading to the Garbhagrha of Deogadh are[3] 6' 11" x 3' 4½" which approximates to the dimensions laid down in our text. It was held that the door should be constructed in the middle of the side walls so as to have equal parts of the wall left on either side. It was further held that it should be situated in one of the four cardinal quarters and not on intermediate direction.[4] From his survey of the Gupta temples Cunningham[5] concludes that deviation in plan from the cardinal point was one of the characteristics of the Gupta style and suggests that it may have been an intentional deviation of one Naksatra or lunar mansion amounting to 13° 12'.

The doorjamb (Sakha) and the lintel and sill (Udumbara) of the cella should each be in breadth equal to a quarter of its height and their thickness being a quarter of the width of the door, i.e.,[6] half their own width.

A number of decorative features have been outlined to make the door more attractive and beautiful. It is recommended[7] to have doorjambs upto nine vertical mouldings.

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1. ASI NS vol 11 1931 p. 144 fig 93. Another temple at Paraoli in Kanpur is 13' 4" in external diameter, the cella measuring internally 6' 8" (CASR xi p. 46).
2. BS lvi.12. cf Kasyapa, Utpala p. 759.
3. MASI no. 70 p. 12 pl. xi (a). The height of the doorways of the caves 1,4 and 5 at Ajanta is about twice the width.
4. BS lvi.10.
5. CASR ix pp. 43-44.
6. BS lvi.13.
7. Ibid. 14.

The doors were profusely carved with floral designs, amorous couples, mosaics and dwarfish figures with doorkeeper on either side. We find on the doorjambs of the Gupta temples representation of Kamlata motifs showing both male and female figures separately or as Mithunas, a very apt example being that from Garhava.[1] The doorjambs of the Siva temple at Bhumara and the Visnu temple at Eran each consist of three distinct vertical bands of carving.[2] The doorkeepers are sculptured at Udayagiri,[3] Nachna Kuthara,[4] Deogadh etc. The sculptures of goddesses Ganga and Yamuna on Makara and tortoise respectively, so common at Deogadh, Nachna Kuthara, and Tigova and decorative miniature figure of the cult deity enshrined in the cella in the centre of the lintel as at Deogadh,[5] Bhumara,[6] Dah Parbatiya[7] and other places,[8] are conspicuous by their absence not only in our texts but also in the other early texts.

INSTALLATION CEREMONY: Temple is not only the house and the seat of god in which he dwells but is also likened to His body. 'The image in the Garbhagrha is the Life (Jiva) of the temple concealed in the darkness of the cave, enclosed by the mountain of its walls'.[9] On the ceremony of the

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1. JOI vol xiv no.1 p.31.
2. MASI no.16 pp.4-5 pl.iii a; CASR p.66. The doorjambs of the Deogadh (MASI no.70, pp.12-13 pl 9a) and the Siva temple at Dah Parbatiya in Assam (ASIAR 1924-25 p. 98 pl.xxxi c) however, comprise four mouldings of carving on each side which do not agree with the prescribed rule.
3. CASR x pp. 50-51.
4. CA pl.xii fig.23.
5. MASI no 70 p.12, pl.iv,ix a.
6. Ibid. no. 16 p.5 pl.iii b.
7. ASIAR 1924-25, pl. xxxi c.
8. cf CASR ix pp. 42-44.
9. HT p. 359.

installation of the image in the sanctum the architect[1] virtually hands over the responsibility of the temple to the priest. It is on this occasion when the devotees fulfil their promise to god.

The image of the deity to be installed should be double the height of the pedestal over which it stands and the combined height of the both must be equal to the door of the Garbhagrha diminished by an eighth.[2] The idol, before the installation, was properly checked to make sure that it was in perfect condition.[3] A mandapa was specially designed for the occasion.[4] In the centre of the mandapa the image was placed on the cowdung smeared ground. It was followed by a bath of the image with water brought from the sacred rivers and mixed with various kinds of herbs, flowers and scents, which was done to the accompaniment of music and chanting of Purusha and other Vedic hymns. After the bath-giving ceremony the image dressed up with new garments and

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1. The Visnudharmottara (chs. 86-87) describes the installation of particular deities in particular temples thus: Kunjara is associated with Kinnaras and Sakas; Bhadra - Bhadrakali; Garuda - Aditya in the main temple and Danda and Pingalaka in the two side temples or Sukra or Sani or Kesava and Samkara etc.; Caturasra - Sakra with multitudes of gods or Yama with Pitrs or Mahakala with Matrs; Guharaja - Bhadrakali or Visnu lying on the serpent bed; Sarvatobhadra - Hari in his four-fold aspect, Vasudeva faces the east, Samkarsana faces the south, Pradyumna the west, Aniruddha the north. Laksmi should be placed to the right of eastern Mandapa, etc. On the Jagati band were also placed a number of gods and goddesses.
2. BS lvi.16.
3. Ibid. lx.6.
4. Ibid. ch. lx deals with the installation of idols.

adorned beautifully with many kinds of ornaments, followed by the worship was finally laid to rest on a well spread bed. The image was then awakened from slumber with the tunes of melodious songs and having worshipped again it was taken into the cella in a procession round the temple from left to right with the accompaniment of the sounds of conches and other musical instruments, where it was placed in the pit of the pedestal in which a gold-piece had been deposited amidst the gathering of the Brahmanas and religious assembly.

It is laid down that the installing priests of various deities should belong to the respective sects.[1] It is further held that these different priests have to perform the ceremony for their respective gods according to the rules peculiar to their sects.

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1. Installing priests are: Of Visnu is Bhagavata; Surya, Maga; Siva, Pasupata; Devi, those adepts in the rites of Mother's circle; Brahma, Brahmana; Buddha, Buddhist; and Jina, Jaina.

CLASSIFICATION OF TEMPLES

Sr.No.	Type	Shape of ground plan	No. of storeys (Bhumi)	Height in cubits	Width in cubits	No. of Sikharas	No. of Anda	No. of Dvara
1.	Meru	six-sided	12	64	32			4
2.	Mandara	six-sided	10	60	30	one		
3.	Kailasa	six-sided	8	56	28	one		
4.	Vimana-Cchanda			42	21			
5.	Nandana	six-sided	6	64	32		16	
6.	Samudga	circular	1	16	8			
7.	Padma	circular	1	16	8			
8.	Garuda	Garuda shape with wings and tails	7	48	24		20	
9.	Nandi Vardhana	Garuda without wings and tails	7	48	24		20	
10.	Kunjara	Elephant back	1	32	16			
11.	Guharaja		1	32	16			
12.	Vrsa	circular	1	24	12			
13.	Hamsa	swan shape		24	12			
14.	Ghata	pot shape		16	8			
15.	Sarvatobhadra		5	52	26	Many		4
16.	Simha	twelve-angular		16	8			
17.	Vrtta	circular	1				1	
18.	Catuskona	quadrangular	1				9	

TYPES OF TEMPLES: Varahamihira enumerates twenty types of temples namely,

Meru	Samudga	Guharaja	Simha
Mandara	Padma	Vrsa	Vrtta
Kailasa	Garuda	Hamsa	Catuskona
Vimanacchanda	Nandivardhana	Sarvatobhadra	Sodasasra
Nandana	Kunjara	Ghata	Astasra

The architectural details of the above temples are given in the chart on the opposite page.

The Matsya Purana[2], Bhavisya Purana[3] and Visvakarma Prakasa[4] also give twenty types of temples with similar classification as available in the account of Varahamihira, the only difference being in the nomenclature of certain types of temples. Thus the Matsya Purana mentions Gaja, Kumbha, Vartula and Mrga in place of Kunjara, Ghata, Vrtta and Guharaja respectively; the Visvakarma Prakasa, Padmaka in place of Padma, Suparna in place of Garuda and Mrgaraja in place of Mrga of the Matsya Purana and possibly Guharaja of Varahamihira; and the Bhavisya Purana, only Grharaja in place of Guharaja. The term Grharaja is also mentioned in the Agni Purana and the Garuda Purana and the Visnudharmottara. The Manasara possibly refers to it in the name of Grhakanta. The

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1. BS lvi. 17-19. cf SSD lxiii.1-34.
2. cclxix. 28-56.
3. cxxx.24-37.
4. vi.82-107.

Agni Purana[1] and Garuda Purana, however, give a long list of 45 names sub-divided into five groups viz., square, rectangular, circular, oval and octagonal temples. The Manasara's[2] account of 98 types of temples is classified into 12 categories based on the number of storeys, the first category representing single-storeyed buildings; and so on upto the twelfth category.

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2. Group A (Vairaja, Square, Catusrah):- Meru, Mandara, Vimana, Nandivardhana, Nandana, Sarvatobhadra, Bhadra, Rucaka, Srivatsa.
Group B (Puspaka, Rectangular, Ayatah):- Valabhi, Grharaja, Mandira, Brahma-mandira, Bhuvana, Prabhava, Sivika, Sala, Visala.
Group C (Kailasa, Circular, Vrttah):- Valaya, Dundubhi, Padma, Mahapadma, Vardhani, Usnisa, Sankha, Kalasa, Srivrsa.
Group D (Manika, Oval, Vrttayata):- Gaja, Vrsabha, Hamsa, Garuda, Rksanayaka, Bhusana, Bhudhara, Srijaya, Prthividhara.
Group E (Trivistapa, Octagonal, Astasra):- Vajara, Cakra, Svastika, Vajrasvastika, Cakrasvastika, Khadga, Gada, Srikantha, Vijaya.

2. Single Storeyed Buildings:- Vaijayantika, Bhoga, Srivisala, Svastibandha, Srikara, Hastiprstha, Skandatara, Kesara.
Two Storeyed:- Srikara, Vijaya, Siddha, Antika, Parsnika or Paustika, Adbhuta, Svastika, Puskala.
Three Storeyed:- Srikanta, Asana, Sukhalaya, Kesara, Kamalanga, Brahmakanta, Merukanta, Kailasa.
Four Storeyed:- Visnukanta, Caturmukha, Sadasiva, Rudrakanta, Isvarakanta, Mancakanta, Vedikanta, Indrakanta.
Five Storeyed:- Airavata, Bhutakanta, Visvakanta, Murtikanta, Yamakanta, Grhakanta, Yajnakanta, Brahmakanta.
Six Storeyed:- Padmakanta, Kantara, Jyotiskanta, Saroruha, Sundara, Upakanta, Kamala, Ratnakanta, Vipulanka, Vipulakrtika, Svastikanta, Nadyavarta, Iksukanta.
Seven Storeyed:- Pundarika, Srikanta, Sribhoga, Dharana, Panjara, Asramagara, Harmyakanta, Himakanta.
Eight Storeyed:- Bhukanta, Bhupakanta, Svargakanta, Mahakanta, Janakanta, Tapaskanta, Satyakanta, Devakanta.
Nine Storeyed:- Saurakanta, Raurava, Candita, Bhusana, Supratikanta, Visvakanta, Vivrta.
Ten Storeyed:- Bhukanta, Candrakanta, Bhavanakanta, Antariksakanta, Meghakanta, Ambujakanta.
Eleven Storeyed:- Sambukanta, Isakanta, Cakrakanta, Yamakanta, Vajrakanta, Akrakanta.
Twelve Storeyed:- Pancala, Dravida, Madhyakanta, Kalinga-Kanta, Varata (?Virata), Kerala, Vamsakanta, Magadhakanta, Janakanta, Sfu (gu)rjaka.

The Visnudharmottara[1] gives the names of 100 temples. The account of Manasara differs from that of Varahamihira not only in the mode of classification which is based on the number of storeys vis-a-vis the number of temples, but also in its description. There are only two types of temples of similar nomenclature in the accounts of both Manasara and Varahamihira but they too differ in their descriptions: whereas Kailasa has been provided with eight storeys in the account of Varahamihira, the Manasara gives only three; Padma has one storey in the description of Varahamihira, the Manasara under the name of Padmakanta provides it with six.

The first three types of temples viz., Meru, Mandara, and Kailasa denote the name of the mountains. There are innumerable inscriptions which extol eloquently and unceasingly the temple as the mountain.[2] The Mandasor inscription of the temple of Surya built in 437-38 A.D.

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1. Himavan, Malyavan, Srngvan, Agara, Bhavana, Grha, Nisadha, Nila, Sveta, Vindhya, Valabhi, Vrddhida, Triguna, Sikhara, Nrgrha, Vrtti, Kamada, Turaga, Kunjara, Yathista, Vasala, Bhadra, Dvarasala, Subhadra, Gandhamadana, Suktimana, Mandara, Pariyatra, Alaka, Vimana, Nandana, Pancaka, Caturaska, Tribhumi, Dvibhumi, Kamala, Arunodaya, Guha, Garuda, Sarva, Trailokya, Linga, Sarvakita, Brahmanda, Sara, Caturasra, Samekhala, Dvimekhala, Mekhaladhya, Dhisnya, Salya, Budha, Indu, Candra, Megha, Ambuda, Akasa, Grha, Bahubhumika, Meru, Trikuta, Saumya, Rajaraja, Dharanidhara, Vimana, Surarata, Ananda, Susama, Prabhanjana, Visvakarma, Ekabhumi, Samudga, Nandi, Guharaja, Vrsa, Hamsa, Ghata, Simha, Mandapa, Kailasa, Dvadasasri, Sadasri, Astasri, Mahasumana, Chhatra, Mrdanga, Vajra, Lokapala, Digbandha, Samanya, Suguha, Triguna, Nandaka, Akasani, Sankha, Sodasasri, Vaijayanta, Ambuda , Mangala, Sarvatobhadra (chs. 86-87).
2. The Kalachuri ruler Yasahkarna is said to have built at Kasi the temple Karnameru proclaiming his great fame, resembling 'the circle of waves of the milk oceans' and being so lofty as to lessen'the fatigue of the multitudes of the celestial damsels playing in the sky, with the breezes of the flags waving from its golden spires'(EI xii p.212;CII iv,pp.293,

describes it with its broad and lofty spires resembling a mountain.[1] The temples at Khajuraho built on high basements look like high mountains. The Meru is hailed as the 'King of Prasadas' in the Samranganasutradhara,[2] and is described as four-sided in the Matsya Purana.[3] The Prabhavakacarita refers to a Siva temple as Siddha-Meru.[4]

The Meru, Mandara, Kailasa, Vimanacchanda and Nandana have the same plan which is expressed by the term six Asras (Sadasra), which should not be translated as an angle but a face or a side. This means that these temples are six-sided and not hexagonal.[5]

The Samudga temple which is circular in shape, probably inspired by Buddhist Stupa designs, is seen in the cylindrical brick structure, known as Maniyar Math at Rajgir.[6]

We have the apsidal structures in the Kunjara and Guharaja types of temples.[7] This style having been also derived from the Buddhist Caitya architecture became very popular during the Pallavas of Kanchi. These are found in the ratha of Nakula and Sahadeva at Mamallapuram,[8] the Durga

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303-04). Gangeyadeva is stated to have 'made this earth... though situated below, soar higher than heaven which is an abode of gods, by constructing a matchless Meru'(EI ii pp.11, 15; CII iv pp.315, 318).

1. CII iii p. 79.
2. lv.3.
3. cclxix.30.
4. IA xxvi 1897 p.164 fn.11.
5. HT p. 271.
6. CA pl.x fig.19.
7. According to Kramarisch, " the different shapes of the temple carry suggestive names" and opines that 'the shape of the Kunjara temple might have been apsidal'(HT p.170).
8. JOAS 1928 p. 259 and plate facing it.

temple at Aihole and the brick temple of Kapotesvara at Chezerla in Guntur.[1] The name Guharaja may be traced in the actual temple such as the 'Kuraja (Guharaja)Bir' temple,[2] located in the jungles between Deogadh and Chandpur in Madhya Pradesh. Caves and mountains in the architecture of Greater India imply the names for the total temple, Ku (Guha) in Burma, Giri (mountain) in Cambodia and Meru in Bali.[3]

The Sarvatobhadra is a very important temple in Indian temple architecture. Almost all the temples are shaped on this pattern not only in India but also in other parts of the world where Indian conception of temple building has penetrated.[4] The Visnudharmottara devotes full one chapter to describe this form of temple in 63 verses. The main temple at Paharpur in Bengal agrees in general with the plan structure of Sarvatobhadra.[5]

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1. According to Utpala (pp.762-63) Guharaja temple has the form of a cave (guha). Its height is 32 cubits of being twice the width of the Prasada, and implies a superstructure as high as the walls of the Garbhagrha. In the Samarangana-sutradhara (ch.lix. 193-97), the term Guharaja is mentioned as Guhadhara. cf VD iii ch.86, verse 59.
2. ASIAR 1915-16 pt.i p.17 pl.ii b. 3. HT p. 171.
4. "One who builds a Sarvatobhadra temple", according to the Visnudharmottara, (vol iii ch.87, verse 44 ff) " and properly worships all gods is called a Cakravartin in the first Kalpa of the Tretayuga. One who builds the surrounding temples lives in the heaven as long as he desires and then he is united with Visnu. One who worships all the gods with the parafernalia of Gandha, Malya, Namaskara, Dhupa, Dipa and Anna in this temple, one gets the benefit of making the gift of three worlds. Undoubtedly he gets whatever he desires". In the Karkola inscription of Bhairava II (EI viii pp.132,136) a Tribhavana Jina Caityalaya having four faces is styled Sarvatobhadra.
5. The Struggle for Empire, p. 639. But P.K. Acharya points out that the temple, as it is,does not agree either with the description given in the BS or with those in the Matsya Purana according to which it should have five storeys, 16 corners with various shapes and art-gallaries(citra-sala) and should be 30 cubits in width (Dictionary p.408); JOI vol 12 no2, p. 142.

The walls are built all round in the temple whether it is square (Vrtta), eight-sided(Astasra) or sixteen-sided (Sodasasra) so as to leave a dark passage between these and the garbhagrha and that the door is placed on the west so that when one enters the Prasada it is to his left.[1] The outer wall is not carried upto the full height of the Prasada but it ends at a lower level than those of the Prasada and is connected with the main building within it, by a roof. The ground plan of the Mundesveri[2] temple at Bhabua, Arrah, built before 634 A.D. corresponds to the definition mentioned above. The Sankaracarya[3] temple at Srinagar of the 8th century A.D. follows the same pattern. The structures of the temples at Bhumara, Nachna Kuthara, Lad Khan, Meguti temples at Aihole and at Badami in the Deccan are similar to the account of Varahamihira as far as the general outlook of the structures is concerned. The Sodasasra temples are very rare. It is suggested that externally the plan of the small temples at Paraoli in Kanpur and at Kurari in Fatehpur Districts of Uttar Pradesh might have been a sixteen-sided polygon, the cella[4] being circular in shape.

The four types viz., Vrtta, Catuskona, Sodasasra, and Astasra, may be called precursors of the so-called Dravida school of art, the fundamentals of which are the covered pradaksinapatha, rectangular in plan and pyramidal in elevation.

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1. Utpala p. 764.
2. Banmerji, R.D., History of Orissa ii plate facing p.240. cf ASI NS 11 p. 143.
3. ASIAR 1915-16 pl.xliv-xlv a; cf HT p. 272.
4. Ibid. 1908-9, pp. 17,20 fig.6.

The most vital point regarding the identification of the above mentioned types of temples has attracted the attention of a few scholars. It is suggested by some that the Varahamihira's description of twenty temples include only the storeyed-structures and not the curvilinear Sikhara types.[1] This allegation is hardly sustainable. It may be mentioned here that Varahamihira describes both the storeyed-structures as well as the curvilinear Sikhara types as is evident from the chart enclosed.

A few of the temples viz., the Padma(lotus) cannot be identified with the extant remains which is also applicable to the Garuda and the Nandivardhana types. Whether these types denote rectangular or oval shapes, is equally open to question. Hamsa (swan) also falls in the same category. Another disputable type is Ghata (pot), which may be circular, but again it is difficult to ascertain. It is quite possible that such types might have been prevalent in the earlier period which having been modified later, lost their distinctive characters.

Some have tried to classify these types into Nagara, Dravida and Vesara schools. Nothing can be said categorically on the matter. First of all, the description of the temples is not copious enough to ascertain the exact shape. No doubt Varahamihira is the foremost writer to refer to the Sikharas, but he omits the description of the various proportions and their respective measurements, which may be overlooked due to the fact that the age of Varahamihira was not more than

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1. ASIAR 1924-25 pp. 125 ff.

the formative period of Indian temple architecture which can further be testified by the extant remains whence it may be inferred that the Sikhara was in the developing stage. The same may be said about the storeyed-structures. But, however, the stage had been set for further progress in this "purest type in which the parts are related with each other and with the whole in a geometrically progressive series"[1]. In this formative period nor does he classify them into watertight compartments of Nagara, Vesara and Dravida schools and the inference on such basis will not hold ground, since the differences among these schools had not yet been streamlined. A few distinctions are conspicuous but the classification on such scanty material is not warranted. And the contemporary literature avoid such conclusions. The Agni, the Matsya and the Bhavisya Puranas do not mention the regional names of the

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1. HT p. 240. S.K. Saraswati describes the characteristics of Nagara and Dravida as follows:- " The three styles - the Nagara, the Dravida and the Vesara - are always distinguished in the texts by their shapes. As for example, the texts are all agreed in laying down that a Nagara temple is quadrangular all over i.e., from the base to the Stupi. But this feature of the plan is so very general and common that it is difficult to consider it as a sure and distinctive cognisance of a particular-style. In its origin every type of building may be found to have begun from a quadrangular shape and to have retained it, with slight modifications until a very late stage in evolution. The Octagenal and Circular shapes respectively of the Dravida and the Vesara styles are also too inadequate to be regarded as sure and distinguishing marks for the style concerned. Under the circumstances, one has to depend on the evidence of the monuments themselves for a knowledge of the particular form and features of any one of the styles, (Indian Culture vol viii pp. 184-85).

temple architecture. Similarly the Visnudharmottara avoids such distinction. Likewise the Visvakarmaprakasa and the Manasara are silent on the issue. These distinct schools are mentioned only in the texts of the mediaeval period viz., the Samaranganasutradhara,[1] the Isanasivagurudevapaddhati,[2] Kamikagama etc.[3] A western Calukya inscription from Holal, Bellary District, speaks of four types of buildings, called Nagara, Kalinga, Dravida and Vesara.

Varahamihira, it may be pointed out here, not only refers to the Brahmanical temples but also to the Buddhist and Jain temples. So Varahamihira's description is neither parochial nor ecclesiastical but secular - a composite picture of the whole of India. The description of the iconography of the images of the Buddha and Jina testify the above statement. It may hence be concluded that the account of Varahamihira forms the nucleus of the Indian temple architecture.

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1. In the Samaranganasutradhara and the Isanasivagurudeva-paddhati the term Vesara does not occur, whereas Nagara and Dravida are frequently mentioned. The term Varata (Samarangana ch lxiv) is, however, mentioned as a regional school of architecture.
2. The Kamikagama (ch xlix.18-20), the South Indian Agama, assigns the Nagara temples to the country from the Himalayas to the Vindhyas, Vesara from the Vindhyas to the river Krsna and Dravida from the Krsna to Cape Comorin.
3. Annual Report of the Assistant Archaeological Superintendent, Southern Circle for Epigraphy, 1915, pp. 49,90.

SECTION III

ICONOMETRY

Iconometry is the art of image-making which includes the general instructions for the particular images as laid down in their respective religious traditions as well as proportionate measurements of the individual limbs. The anatomical accuracy in the art of portraiture was considered to be the prerequisite qualification of a sculptor or a painter. The science of anatomy seems to have been well developed in ancient India and their proportions of the body were in no way inferior to a Grecian athlete or Roman senator. All the images of the schools of Mathura and Sarnath and other regions are certainly carved according to a fixed system of proportion, the description of which is available in the texts dealing with the subject. Varahamihira has given a vivid description of iconography of various images in general and in particular too. For secular art and other categories also he brings forth the different types of persons with their respective qualities which may be utilised by the artists for their solo or collective representation. The image must be rendered strictly in accordance with the orthodox traditions, which otherwise becomes useless for the purpose of worship.

Varahamihira belongs to the earliest school of writers who have written on iconography. The other texts being the

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Puranas viz., the Matsya,[1] Agni[2] etc., written in the first phase of the Gupta-empire and the Visnudharmottara[3] written in the later phase. Also written during the latter phase and mediaeval times are the various Silpa-Sastra texts[4] numbering about three hundred mostly preserved in unedited manuscripts.

Digit (Angula) is the unit of measurement adopted by Varahamihira in giving various proportions of an icon. Two types of the angulas seems to have been used in the Brhat Samhita - absolute angula and relative angula, the former being a part of a hierarchy of certain measurement and the latter is obtained by dividing the entire height of a given image into 108,120 etc., equal parts each being called a angula known as Dehangula described in the later Agamic texts.[5] Citing an

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1. Mat. chs. 252,259,260-64,166-67.
2. Agni chs. 43-46, 49-55, 60 and 62.
3. pt. iii chs. 44-86.
4. Kamika chs. 62,64-65,67-68,74.
   Karna pt. i chs. 9,11-14,19,41,59,62,66 and 88.
   pt. ii chs. 7,8,11,13,15,18,20.
   Suprabheda chs. 33-34, 36-38 and 40.
   Vaikhanasa chs. 22.
   Amsumadbheda ch. 28.
   Silpa-sastras:
   Mana chs. 43,45,48-53,56-70.
   Agastya-sakaladhikara: exclusively on sculpture.
   Kasyapiya-Amsumad-bheda. chs. 46-84.
   Silparatna chs. 1-31.
   Visvakarmiya-silpa chs. 1-17.
   New Visvakarma-Vastusastra: Mss in the Saraswati Mahal Library, Tanjore.
   Aparajita-praccha Sutras 196-203.
   SSD and Maya
   Tantras: Hayasirsa;
   Pratistha-Paddatis-Caturvarga-Cintamani of Hemadri and Haribhakti-vilasa of Gopalabhatta, and
   Dhyana Literature.
5. MASI no. 3, p. 38.

example of the latter from an icon measuring 108 angulas in height, Varahamihira lays down that the length and width of the face of an image should be 12 angulas of its own.[1] Commenting on this statement, Utpala states that the whole height of the block of timber or stone from which an image is to be fashioned leaving aside the portion of pedestal, should be divided into 12 equal parts, each of which again be sub-divided into 9 equal parts known as angulas; thus an image consists of 108 angulas of its own; lastly the length and breadth of the face of the image should be 12 such angulas i.e. the angula of the image itself.[3] The higher unit of measurement was 'hasta' translated as cubit which was employed in the Vastuvidya.[4]

The classification of the images from the height point of view is of three types: the images measuring 108,96 and 84 angulas are grouped as the best (pravara), medium (sama) and inferior (nyuna) respectively.[5] This shows that the most common height of the images during the Gupta times was 108 digits or angulas. But Varahamihira makes exception in the case of Rama, the son of Dasaratha, and Bali, the son of Vairocana, whose height is fixed at 120 angulas.

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1. BS lvii.4.
2. p. 770. cf DHI pp. 317-18.
3. Another type of relative angula called Matrangula, which is taken to be equal to the length of the middle digit of the middle finger of either the sculptor or the architect, or of the rich devotee who causes an image to be set up seems to have been missed or unknown to Varahamihira. MASI no.3, p. 38. According to the Sukranitisara (iv.4.82) Matrangula is the fourth part of one's own fist.
4. Utpala p. 769.
5. BS lvii.30.

FIVE CATEGORIES OF PURE MEN: Varahamihira describes the anatomy and characteristics of 'five categories of pure men' and the same number of 'Mixed types' which may be enumerated as : Malavya, Bhadra, Sasa, Hamsa and Rucaka under the former and Jaghanya, Vamanaka, Saci (Sacin or Sami or Samin), Kubja and Mandalaka under the latter.

The Malavya type is described as handsome, with shining eyes, fine cheeks and white teeth. His face is 13 digits in height i.e., length and ear-holes at a distance of 10 digits from each other. His lower lip is not very fleshy whereas the other limbs and joints of the body are full of flesh. He has very long arms reaching knees. His body is even and slender in waist. His height is 108 digits. He inhabits the regions of Malava, Broach, Surastra, Lata, Sindhu, and the Pariyatra mountain.

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The Bhadra has a face like a tiger, good nose, beautiful forehead, and temples which are densely covered with tender and slender hair, and equal and well-knit brows. His hair are dark, curly and single in each pore. His breast is large and muscular and arms are well-developed, equal, round and long. The shape of his belly is good. His hands and feet have the lustre of the interrior of lotus, and which are marked with the figures of ploughs, staves, maces, swords, conch-shells, discuses etc. His gait is majestic like an elephant. His genital organs are not very prominent but hidden like that of the horse's or the elephant's. His weight is 2000 Palas and height 84 or 105 digits. He inhabits the central countries.

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1. BS lxix.10-12. cf Saravali ch.37. 29-30; Utpala p. 884.
2. Ibid. 13-19. cf Ibid. 40-43; Ibid. pp. 887-88.

The Sasa[1] type has marrow as the predominant feature of his body and slender in waist, prominent but thin teeth, large eye-balls , plump cheeks but thin nails. His height is 92 digits.

The Hamsa[2] has round head, red face having a golden hue raised nose with plump cheeks, eye like honey and red nails with handsome feet. The limbs are clean. His height is 96 digists and weight 1600 Palas. The Hamsa type belongs to the upper strata of the Khasas, Surasenas, Gandharvas and the people of the Yamuna-Gangetic region. He takes delight in the water sports.

The Rucaka[3] has oblong face, attractive eye-brows and hair, and conch-like neck. His complexion is good. The girth of the waist is equal to the length of the face. The knees and shanks are lean. He has a height of 100 digits and his weight is 1000 Palas. He is adventurous by nature.

The Samrangana[4] Sutradhara does not agree with the account of Varahamihira on the question of the height of the different five-men, according to which the respective heights are 96,94,90,88 and 92 digits whereas Varahamihira gives 108, 105,99,96 and 102 digits. Utpala cites Parasara's view who lays down that such standards are applicable to great men of the rank of kings.[5]

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1. BS lxix.20-23. cf. Sarasvali ch.37. 34-36, Utpala p. 890.
2. Ibid. 24-26 cf Ibid. 37-39, Ibid, p. 891.
3. Ibid. 27-30 cf. Ibid. 31-33, Ibid. p. 893.
4. ch. 81.
5. p. 882.

MIXED TYPES: [1] The Jaghanya belongs to the inferior Malavya group. His ears are like crescent; joints, good; complexion, rough; and fingers, thick. He is copper coloured.

[2] The Vamanaka belongs to the inferior Bhadra group. He is hunch-backed, and has underdeveloped thighs, waist and the armpits. He is devoted to Lord Vasudeva.

[3] The Saci comes under the inferior category of Sasa group. He is very ugly and has a deformed body.

[4] The Kubja belongs to the inferior category of group of Hamsa. He is slightly weak, and bent on the upper part of the body but has no defect in the lower limbs.

[5] The Mandalaka belongs to the inferior category of Rucaka group. He looks old in appearance and has rought and hard hair.

These are depicted as the attendants or the other inferior types of persons in a painting or a frieze comprising the 'Mixed' types whereas the 'Pure men' are depicted as the higher strata of the society.

The 'Pure' and 'Mixed' types suggest a wider range for the sculptors in general and to the painters in particular. Such types were utilised in group painting where various types of persons are depicted with their different moods and feelings. Hence a study of these types must have enriched the minds of the painters and sculptors for drawing or moulding different varieties of scenes. The most interesting thing mentioned

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1. BS lxix.33-34.
2. Ibid. 32.
3. Ibid. 30.
4. Ibid. 35-36.
5. Ibid. 37-38.

by Varahamihira regarding these types is the particular regions they abound in, so that a person from that region is depicted accordingly with his height and weight.[1] Bannerjea comes to the conclusion that the physical features of Malavya as enumerated by Varahamihira contain several of the Mahapurusa laksanas, which are characteristic signs of a Buddha or a god.

Varahamihira undoubtedly gives the iconographical measurements of the gods and goddesses of the various religious sects in terms of the human body. In order to keep the entity of the particular images and to differentiate them from the human beings he bestowed upon them the auspicious marks and special height.

Whether these categories are the racial types can not be ascertained but some sort of such distinction can not be ruled out. But according to Varahamihira this division is based on the Rasis and the planets.[2]

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1. DHI p. 312.

2. BS lxix.3-6. The Sun is said to be the source of undiminished mettle; Moon, physical and mental qualities; Mars, valour; Mercury, physical growth and weight; Jupiter, voice; Venus, cleanliness; and Saturn, complexion.
The persons born under the influence of the particular stars are accordingly shaped.

PROPORTIONATE MEASUREMENTS:

Varahamihira gives the measurements of individual limbs as follow:

Head	C.32 digits
	W.14 "
Forehead	L.4 " (horizontally 8 digits).
Face	L.16 " (Face 14 digits and hairline 2 digits).
Lower lip	W.1 "
Upper lip	W. ½ "
Dimple above the upper lip	B. ½ "
Mouth	L.4 " W.1½ "
Mouth when open	W.3 " (in the middle)
Sides of the nostrils	B.2 "
Height of the nose from the nostrils to the tip	2 "
Nose	L.4 "
Space between the eyes	4 "
Eyes	L.2 " W.1 "
Sockets	L.2 "
Diameter of Pupil (eye ball)	⅓ of the eye i.e. 2/9 digit.
Diameter of the vision of the pupil	1/5 of the eye i.e. 2/5 digit.
Eye brows	L.10 digits.
From one end to another	W. ½ "

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1. BS lviii. 4-38.
2. It is stated in a picture, only 12 digits are visible and that the remaining 20 are not visible. BS lviii.14.

Internal between the brows	L. 2 digits.
Each Brow	L. 4 "
Hair-line on the forehead (equal to the brows)	L. 10 " W. ½ digit
Extent of Inner Corner of the eye (Karavīraka)	1 "
Ears	L. 4 digits B. 2 "
Distance between the eye corner and the ear. [1]	4 "
Temple (The temples to be shown 2 angulas further off from the forehead, their downward Length being 4 digits).	L. 4 " B. 2 "
The Ear-hole and the raised tip of the flesh near it called Sakumāraka should be made at the same level as the centre of the eye, their extent being same.	1 digit
[2] Chin (Cibuka)	L. 4 or 2 digits
[3] Jaws (Hanu)	B. 2 digits
Neck	W. 10 " C. 21 "
Distance between the lower part of the neck and the heart	12 "
Distance between the heart and the navel	12 "
Distance between the navel and the penis	12 "

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1. According to Vasistha, it is four digits (vide Commentary, p. 771). cf Bannerjea, DHI p. 583; Kern, JRAS 1873 p. 324; Gopi Nath, MASI no 3 pp. 77.
2. Utpala's explanation of the word 'Cibuka' is not clear. First he says, that ' the portion of the nose measuring four angulas is known as Cibuka' and next that 'the portion below the mouth is indicated by the word 'Cibuka', p.770.
3. According to Utpala it is the two joints of face and neck. Gopi Nath Rao translates it as Chin, MASI no 3, p. 77.

Navel	D. 1 digit. W. 1 "
The Waist at the centre of the Navel	Periphery 42 digits.
Distance between the Nipples	16 digits.
Distance between the paps and the armpits in the oblique direction.	6 "
Full shoulder	L.16 "
Arm	L.12 " B. 6 "
Fore-arm	L.12 " B. 4 "
Wrist	C. 12 "
Palm	L. 7 " B. 6 "
Middle finger	L. 5 "
Fore finger	L. 4½ "
Ring Finger	L.4½ "
Little finger	L. 4 "
Thumb	L. 2 "
Remaining fingers	L. 3 "
Nails	The length and width of the nail should be half of the joint of the finger concerned.
Shanks	L. 24 digits.
The shanks at the top end	C. 14 " B. 5 "
Shanks at the middle	C.21 " W. 7 "
Patella	L. 4 "
Thighs	L.24 "
Thighs in the middle	W.14 " C. 28 "

Loins	C. 44 digits W. 18 "
Knee in the middle	W. 8 " C. 24 "
Feet	H. 4 " L. 12 " B. 6 "
Great Toe	L. 3 " C. 5 " H. 1¼ "
Second Toe	L. 3 "
Remaining Toes	The length and the height should be less by 1/8th than the preceding one in succession.
Extent of Nail of the Big toe	¾ digit.
Extent of Nails on the remaining toes	½ "

C = Circumference;
W = Width;
L = Length;
B = Breadth;
H = Height.

CLASSIFICATION OF IMAGES: The various images described by Varahamihira may be broadly divided into the following categories:

1. **Brahmanical**

a) Vaisnava:	i) Visnu ii) Rama iii) Baladeva iv) Pradyumna v) Bali vi) Goddess Ekanamsa (Laksmi) vii) Other goddesses.
b) Saiva:	i) Sambu (Siva) ii) Linga iii) Skanda iv) Siva's Hosts.
c) Saura:	i) Surya ii) Samba iii) Revanta.
d) Vedic:	i) Brahma ii) Indra iii) Varuna iv) Kubera v) Yama

2. **Buddhist:** i) Buddha

3. **Jain:** i) Jina (Mahavira)

4. **Miscellaneous:**
   i) Demons, Yaksas etc.
   ii) Narrative sculptures
   iii) Zodiac signs
   iv) Planets
   v) Lunar mansions

VAISNAVA DEITIES: With the emergence of the Guptas as the Imperial power on the throne of Magadha in C.319-320 A.D., Vaisnavism gained new dimensions under the zealous inspiration of its suzerains. The main centre of importance, in the period just preceding the Christian era, was a Vrsni chief, Vasudeva, the human hero, who came to be regarded variously as a part of Visnu[1] or identical with Visnu and the Rsi-god Narayana[2]. It was, however, in the Gupta age that Vasudeva's identification with Visnu became an accomplished fact and the great Mantra 'Om Namo Bhagavate Vasudevaya' came to be the best medium for worshipping Visnu as well. In the time of Panini[3] (C.5th Century B.C.) the Vasudeva sect had already won over the sect of Arjuna and was prominent in the region of Surasena at the time of Megasthenes[4].

In the opening centuries of the Christian era there arose a new sub-sect[5], the Pancaratras which worshipped Vasudeva, Samkarsana (Baladeva), Pradyumna, Samba and Aniruddha under the Vyuhavad. Samba, afterwards, came to be associated with the Sun-cult and ceased to be a member of the Pancaratra pantheon. Side by side with the doctrine of Vyuha, the Pancaratra sub-sect developed the theory of Avatara (incarnation),

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1. SI 'Besnagar Ins. of Heliodorus' p. 96; Hopkins, Epic Mythology, pp. 22-23; Ray Choudhuri, EHVS pp. 102 ff; Tarn, GB, p. 406; Contra: Marshall, Taxila, vol 1, p.37; ASIR, 1914-15, pp. 66 ff; ETSAI pp. 24 ff; Chanda, R.P., Archaeology and Vaisnava Tradition, MASI, no. 5.
2. Bhandarkar, R.G., Vaisnavism, Saivism etc., pp. 46-47.
3. iv.3.95; iv.3.98. See also ETSAI pp 25 ff; Gonda, J., Early Vaisnavism, pp. 160 ff.
4. ETSAI, p. 4.
5. EI xxiv, pp. 194 ff; Farquhar, Outlines of the Religious Literature of India, pp. 98 ff; Schrader, Introduction to the Pancaratra, pp. 25 ff.

which became the most popular form of Vaisnavism[1] in the age of the Imperial Guptas.

The incarnations of Visnu are found in various forms. The Boar (Varaha) incarnations have been found from different places in India viz., Udayagiri (C.400 A.D.), Bhitargaon (near Kanpur, 5th century A.D.), Damodarpur (Bengal, 5th century A.D.) and Eran (Madhya Pradesh, C.5th-6th centuries A.D.).[2] The Boar incarnations adopted in this period were of two kinds; a man with a boar's head or a real boar as at Khoh. The incarnation of Visnu in the form of Nrsimha (Man's Lion) has been found from Lasarh in the Muzaffarpur district of Bihar.[3] Another such image is now preserved in the Gwalior Museum. Other incarnations, though less popular, can be seen on a fragment bearing the figures of Fish, Tortoise, Boar, Man-Lion and Dwarf at Kaman in the Bharatpur State.[4]

Visnu in the form of Child-God was worshipped in the Gopala-Krsna sub-sect with Mathura as its centre which was shifted to Bengal after C. 500 A.D. as proved by the sculptures from Paharpur and its surroundings,[5] which seem to portray the entire life of child Krsna as depicted in the Harivamsa and the Visnu Purana. In agreement with the general

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1. EHVS p. 176.
2. Goswami, K.G., A Study of Vaisnavism, p. 46.
3. ASIR, 1913-14, p. 133. cf Farquhar, l.c. p. 188.
4. The Dwarf incarnation is also indirectly referred to in the Junagadh inscription of Skanda Gupta, SI p. 300.
5. For details see Goswami, K.G., l.c. p. 46.

view, it may be held that the Tantric traits which find expression in the conception of amorous plays of Krsna with Radha were introduced in the sub-sect here for the first time.[1]

In the description of Varahamihira, Visnu has been represented with various attributes (Ayudhas) such as the sword, mace, arrow, bow, buckler, discus, conch, Srivatsa and Kaustubha. Comparing this account with the extant remains of the Gupta period, we find other symbols like the Padma, Garuda, Vanamala, Cosmic Serpent and Ocean,[2] which are conspicuous by their absence in the description of Varahamihira.

The form of Visnu sleeping on the Cosmic Serpent Sesa in the Ocean, so popular a theme in the Gupta and later ages,[3] is also absent in the description of Varahamihira and so is the case with the various animal incarnations like the Boar, Nrsimha, Fish, Dwarf etc. and the Ganga and Yamuna representations so vivid in description in sculptures.[4] But the other human incarnations like that of Rama, son of Dasaratha; Bali, son of Vairocana; and heroes of Pancaratra Vyuha viz., Baladeva (Samkarsana), Pradyumna and Samba; are elaborately mentioned with their peculiar features.

Another important feature of the description of Varahamihira may be found in his reference to Ekanamsa or

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1. ETSAI p. 152.
2. Agrawala, V.S., Indian Art, p. 330.
3. CBIMA p. 22 and nos. 257, 1206, 1285 and 1503.
4. DHI p. 475.

Sri-Laksmi in which she has been represented along with Krsna and Baldeva and also as the consort of Visnu, the Cosmic deity and a popular symbol of beauty and prosperity. This description is at once striking inasmuch as it differs from earlier accounts according to which she had been described as the Daughter of the Ocean, and Lady of the Lake, and depicted in art as a beautiful woman standing in a lotus-pond and bathed with heavenly waters by two or four elephants holding inverted jars in their trunks.[1]

The works of Varahamihira present a vivid and clear description of the images of Visnu and other Vaisnava deities, the details of which are given as under:-

VISNU: The image of Visnu is recommended to have either eight, four or two arms.[2] If drawn with eight arms, the four hands on the right side carry a sword, a mace, and an arrow and the fourth is done in santimudra (emblem of peace or blessings, fingers raised upward), on the left side are a bow, a buckler, a discus and a conch; in the case of four arms, on the right side a mace and the other done in the santimudra and on the left side are a conch and a discus; and in the third category comprising only two arms, the right hand is to be done in santimudra and a conch in the other. These attributes (Ayudhas) could sometimes be given also the form of human attendants and were in that case known as Ayudha-Purusas, as is seen from many Ayudha-Purusa images belonging to the Post-Gupta and mediaeval period in the collection of the Mathura Museum.[3]

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1. Agrawala, V.S., Indian Art, p. 47.
2. BS lviii.31-35. cf VD iii, chs.47 and 60.
3. CBIMA nos 81J, 370, 816-20,853,864,890,968,940 and 2057.

The colour of the body should be dark and attired in yellow garments; the face, serene and calm; srivatsa mark on the chest and adorned with Kaustubha gem, a diadem and earrings. The other parts of body viz., the neck, chest, shoulders and arms must be full and heavy.

The description of Visnu is very vivid in the works of Kalidasa.[1] Visnu in Visnudharmottara is described as sitting on the mount of Garuda with four faces.[2] Visnu is also a very important god in the Tantric Buddhist pantheon.[3] A number of two, four and eight-armed sthanaka murtis of Visnu belonging to the different periods which have been found in various parts of Northern and Eastern India conform partially to the description given by Varahamihira. In a four-armed standing image now in the British Museum Visnu is holding only the three attributes - a mace, a wheel and a conch in his three hands; and the fourth one, i.e., the right upper hand, is represented as if bestowing a boon.[4] Caturbahu Visnu is also represented in the relief of Mathura and Udayagiri cave (facade of Candra Gupta II). In one of the Visnu's icons from Mathura he is also figured as seated on Padmasana with two hands in Dhyanamudra and holding a Cakra and a Gada in the other two.[5] An eight-armed Sthanaka Murti of Visnu may be seen at Badami. The image of Visnu discovered from Indonesia is four-armed.[6]

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1. Raghu x.7,8,10,13,60,61 and 75 etc.
2. VD iii, chs.47 and 60.
3. Nispannyogavali p. 61. Two statuettes of Visnu occur in the Chinese collection (Clark: Two Lamaistic Pantheons,ii, pp. 98 and 156).
4. Canda, R.P., LC p.44.
5. CBIMA nos. 1684.
6. The Art Heritage of India, pl.86 a, facing p. 137.

RAMA: The image[1] of Rama, son of Dasaratha, incarnation of Visnu and hero of the Ramayana, is recommended to have a height of 120 digits. Rama is invariably depicted as two-armed, holding a bow and an arrow, in early sculptures.[2] He was equally popular in Indo-China and Indonesia.

BALADEVA: He was worshipped under the name of Samkarsana. A stone image of Balarama belonging to the second century B.C., found near Mathura and now preserved in the Lucknow Museum, shows the prevalence of Samkarsana cult in the pre-Christian age. The image represents Balarama in a standing posture with a canopy of serpent hoods round his head as well as the coils of the serpent at his back, a Musala (club) in his right hand and Hala (plough)[3] in the left hand. In the account of the Mahabharata[4] Samkarsana is described as having a plough as one of his weapons, whence he is associated with snakes and identified with Sesa and Ananta.[5] J. Gonda is of the view that the club and plough point to his association with agriculture and fertility of the soil. The snakes on the hand indicate that he was either a deity of the Naga cult or had absorbed in himself the influences of the Naga cult.

In the second half of the first century B.C. the cult of Samkarsana came to be associated with that of Vasudeva as is evident from the Ghosundi[6] and Nanaghat[7] records. Such a practice may also be found in the Mahabhasya of Patanjali

1.EI IvIII. 30.
2.DHI p. 421
3.Agrawala, V.S., Indian Art, p. 256.
4.Mbh. xiii.147.55,57-58,60.
5.Aspects of Early Vaisnavism, pp.11 ff.
6.SI pp. 91-92.
7.Ibid. pp. 186 ff.
8.II.2.34 and II.2.23.

(C.150 B.C.) in its reference to the sounding of musical instruments at the gatherings at the temples of Rama and Kesava (Balarama = Samkarsana and Vasudeva= Krsna), denoting thereby close resemblance in the manner of worship of the two cults. In the opening centuries of the Christian era there arose a new sub-sect, the Pancaratras, that included Samkarsana and other members of the Vrsni family in the pantheon[1] and this was evidently the logical outcome of Vasudeva-Samkarsana worship of the pre-Christian times.

Varahamihira's description of Baladeva's iconographic traits is almost similar to that of the Sunga image as described above. He is represented in the account of Varahamihira[2] as a two-armed white-complexioned figure holding a plough in his hand, with intoxicating eyes and wearing earrings. Varahamihira attributes white complexion to Baladeva who is represented in other texts in dark colour, a characteristic peculiar to the deity. In the Kadambari, he is described as putting on dark blue robes, dragging Yamuna with his ploughshare and intoxicated with strong drink.[3] Similar description is found in the Buddhist Tantric literature of the 10th and 11th centuries.[4] In his statues in the Mathura Museum,[5] three of which belong to the mediaeval period, he is

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1. EI xxiv, pp. 194 ff.
2. BS lviii.36.
3. Kad pp. 21,68.
4. Nispannyogavali p. 63.
5. CBIMA nos. R 46, 1116 and 1515.

represented as wearing ornaments, having a drinking cup in one hand and a plough or a Musala in the other, and a snake canopy over his head.

PRADYUMNA: Pradyumna or Kama was the god of love or cupid. In literature he is generally described as a fish-bannered god, using a bow of flowers and five favourite arrows. In the Malatimadhava,[1] Bhavabhuti speaks of a shrine of Kamadeva. Harsa[2] gives a graphic description of Madanotsava, also known as Kamotsava or Vasantotsava, a festival full of merry-making and enjoyment terminating in the evening with the worship of Kama with flowers, sandal, etc.[3] The Pratima of Pradyumna was done along with his consort holding a sword and a shield in both her hands and Pradyumna himself having a bow in his hand, according to the description of Varahamihira.

BALI:[4] The image of Bali, son of Vairocana was also to be drawn with the maximum height i.e., 120 digits, the only other figure having the same height being that of Dasarathi Rama.

EKANAMSA:[5] The figure of Goddess Ekanamsa or Sri Laksmi could also be made with either two, four or eight arms. In the case of eight arms, the four hands on the left side hold a

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1. Act II p. 26.
2. Ratnavali Act I, pp. 10,16,22,26. cf AI II p. 179.
3. BS lviii.40.
4. Ibid. 30.
5. Ibid. 37-39. cf VD iii. ch. 85.

water pot, a lotus, a bow and a book and on the right side, the other four hands carry an arrow, a mirror, a rosary, and fourth to be done in boon-giving mudra.[1] Similarly in the image with four arms, the hands on the left side have a book and a lotus and on the right side, a rosary and the other in boon-giving-mudra. If two-armed, she is placed with Baladeva and Krsna with her left hand on the hip and the other holding a lotus. The image of goddess Ekanamsa between Baladeva and Sri Krsna housed in the Lucknow museum is identical with the above description. The association of Laksmi with Visnu is quite well known in earlier Kusana art. In the Gupta period she is generally depicted as shampooing the feet of Visnu in the Sesasayi form. In the Kusana art Laksmi and Hariti are,however, depicted side by side as the twin consorts of Kubera.[2] She was also later on shown as the wife of Ganesa. The sculptures of Laksmi depicted as Gaja Laksmi were quite popular in the art of Bharhut,[3] Sanchi, Bodhgaya, Udaigiri and earlier Western Indian caves.

<u>OTHER GODDESSES:</u> Varahamihira does not describe the female goddesses separately except Ekanamsa. Being known for his brevity he lays down a general code for the drawing of the various goddesses that they should be represented with the characterstics[4] peculiar to the gods whose name they bear.

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1. Boon-giving-mudra is done with the open palm, fingers pointing downwards.
2. Agrawala, V.S., Indian Art fig. 182.
3. Ibid. pp. 254,259.
4. BS lviii.56.

For example Brahmi should be fashioned with four faces, a water pot in her[1] hand and seated on lotus etc., other features being similar to that of Brahma. But in regard to their bodies, special attention should be paid to the breasts and other feminine parts of the body.

SAIVA DEITIES: Saivism is an admixture of Aryan and non-Aryan elements, representing the Rudra cult of the Aryans and the Indus valley and Dravidian cultures. From this synthesis spread over the centuries evolved the Rudra-Siva deity of the Vedic age. It not only absorbed many of the peculiarities of the Indus valley and Dravidian civilisations in the course of its development but also paved the way for complete fusion between the varying elements. As a result, though Rudra and Siva came to denote the same meanings with each other, Siva emerged more popular than Rudra, virtually replacing it in course of time. If we compare the Indus valley seal referred to by Sir John Marshall[2] with a coin of Huviska[3], the Kushan king who ruled in the second century A.D., we find that despite their being differently represented, the motif is the same in both the cases. This shows that the Rudra cult of the Aryan had completely been absorbed in the non-Aryan god Siva by the time of Huviska.

Panini's reference to 'Sivadibhyon'[4] and 'Ayahsuladandajinabhyam thakthanau' throws a flood of light on

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1. Utpala pp. 784-85.
2. Mohenjo Daro and the Indus Civilisation vol i pp. 58 ff; Wheeler, Indus civilisation, p. 83.
3. Gardner, The Coins of the Greek and Scythic kings of Bactria and India, p. 148.
4. Asta iv.1.112.
5. Ibid. v.2.76.

the evolution of Saiva sects. Dandajinikas referred to in the context may have been the Pasupatas, the account of which[1] can be supplemented by the records of the classical authors and further corroborated by the story of Daksayajna, incorporated in the Santiparvan which give the following description of god Siva: " You have the skin of a black deer for your upper garment and have a snake for the sacred thread ... I bow down to him who has matted locks, who carries the ascetic staff in his hand"[2].

The Pasupata sect of Saivism was at the height of its glory in the early centuries of the Christian era. The term Pasupati literally meaning the lord of flocks, is given a new interpretation under this sect, according to which man is the Pasu, who is fettered with Pasa, and Siva is the lord or Pati, whose grace releases the creature from 'bondage'[3]. Pasupatas were divided into two sub-sects known as Lakulisa Pasupatas which were of an orthodox character and heterodox Pasupatas of the Mahabharata. The orthodox Pasupatism is described in the Pasupata-sutra. It laid special emphasis on Yoga. The account of heterodox Pasupatism is found in the Daksa story of the Mahabharata. The Epic Pasupatism decries the Varnasramadharma, while the Pasupata-sutra enjoins that a devotee should not talk to a Sudra or a female and if by chance he touches any one of them he should perform Pranayam and then mutter the Raudra Gayatri or the name of Vahurupi, which as Kaundinya explains,

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1. McC Mog pp. 162 ff.
2. Mbh. xii.285.45-100. See also Ibid. 283.26-27.
3. HTBAI p. 73.

is the name of Aghora, one of the five forms of Siva.[1] Another special feature of the Lakulisa sect is that it lays special emphasis on Bhakti[2] and states that the god should be meditated in the heart.

The early Indian coins are also helpful to a great extent to trace out the history of Saivism.[4] Representation of (Siva) Lingam is found on the coins hailing from Taxila and one from Ujjayini. The shrine of Siva can be detected on the coins of the early Audumbara chiefs. Anthropomorphic representation of Siva in a standing posture, with a staff in the right hand and a vase in the left, is found on the coins of Ujjayini. Another variety shows a bull slightly prancing up and looking up at the deity. Siva is also represented on these coins as standing.[5] According to J.N. Banerjea, the male figure holding 'club and trident' on the coins of Maues may represent Siva. On the coins of Kadphises I, Siva is represented with a skin upper garment while on the gold coins of Wema Kadphises we find the figure of the deity with trident-battle axe in the right hand and the king is given the title of Mahesvara, i.e., a devotee of Siva. The figure of Siva continued to be shown on the coins of Kaniska, Huviska and Vasudeva. The Bharasivas were great patrons of Saivism. Seals unearthed at Bhita, Basarh and other places of Eastern India, belonging

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1. Pasupat Sutra with Pancarthabhasya of Kaundinya, ed. R.A. Shastri, Trivandrum, 1940. I.13-17.
2. Ibid. II. 20.
3. Ibid. V. 25.
4. DHI pp. 112 ff.
5. Ibid. p. 120.

to both pre-Gupta and the Gupta periods, show that Saivism was in a flourishing state in these regions. Thus Saivism not only flourished under the Indian Kings, but under the foreign rules also.

The development and progress of Saivism remained unabated during the Gupta period though the religious leanings of the Gupta emperors were more towards Vaisnavism. The Mathura inscription of Candragupta II of the year 380 A.D. records the installation of the Lingas, Upamitesvara and Kapilesvara comprising the portraits of the teachers in the Teacher's shrine.[1] The Udayagiri Cave inscription of Candragupta II records that the emperor's minister of Peace and War Virasena Saba of Pataliputra dedicated a cave temple to the god Siva.[2] Similarly Prthivisena, the commander-in-chief of Kumaragupta I, dedicated a Siva-Lingam at Karamdanda in G.E. 117.[3]

Of the contemporary rulers, the Gwalior inscription of Mihirakula[4] shows that he was a worshipper of the god Pasupati; while from the epigraphic records we learn that many of the Vakatakas, Nalas, Kadambas, Salankayanas, Maitrakas, Pallavas, Visnukundins, etc. were Saiva followers.

Saivism gradually began gaining more importance when Vaisnavism was losing its hold in North India after the downfall of the Imperial Guptas[5] and with the installation of the Maukharis as sovereign rulers, who were followers of Saivism.[6] From the records of Hiuan Tsang we find that western

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1. EI xxi. p. 8.
2. Ibid. p.5.
3. SI p. 282.
4. Ibid. pp. 400 ff.
5. Ray Choudhuri EHVS p. 178.
6. HC p. 122.

and north-western India was the principal home of the Pasupata sect and it had spread beyond the frontiers of India in Khotan and in south India Pandyan kingdom was the stronghold of Pasupatism.[1] The great upsurge in favour of Saivism in south India during Gupta and Post-Gupta periods was mainly due to the enormous devotional poetry of Saiva saints popularly known as Nayanmars or Adyars numbering sixty-three. New sects viz., the Agamic Saiva sect, Kapalikas, Kalamukhas etc. were added to Saivism in the Post-Gupta age. The influence of the Tantric ideals became more prominent in the Agama Saivism. As Farquhar says: " The Agamas mark the appearance of Sakta Tantric ideas among Saivas, and are also the earliest of their codes of temple building, image making and religious practices."[2]

SAMBHU: Siva was worshipped in his Linga form as well as anthropomorphically since the times of Indus valley civilisation. Varahamihira deals with both the aspects exhaustively. According to Varahamihira[3] the image of Sambhu i.e., Siva could be made in two different manners viz., independently and with Girisuta (Parvati). While rendering an independent image Siva was to be done with a bull emblem, a moon having a digit in extent on his head and a third eye on his forehead, holding a trident in one hand and a bow called Pinaka in the other. In the second category he should be represented as having Parvati for his left

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1. Watters i.pp.296,331; ii.pp.229,242,251,257,262, and 296.
2. Outline of the Religious Literature of India, p. 194.
3. BS lviii. 42. cf VD iii. ch. 48.

half. In the images of Siva-Parvati together, Siva is represented as Urdhva-reta (perfect Brahmacari) in the Mathura art.[1]

Siva figures are invariably described in two main aspects, one of mild disposition (Saumya) and the other of fierce (Raudra) disposition. Varahamihira, it seems, refers to the former aspect which has also been described in the Puranas. The Buddhist texts on the other hand are very graphic about the description of the ferocious side of Siva who is also known to them as Mahakala.[2] Kalidasa also refers to the temple of Mahakala situated in the city of Ujjayini in the Meghaduta.

LINGA:[3] The Linga, symbol of Siva, is divided into three parts, according to Varahamihira, having the base carved as quadrilateral; middle, octagonal; and the upper one i.e., shaft, cylindrical. The quadrilateral portion of the Linga should be buried in a pit in the earth, the middle one in that of the pedestal and the pedestal around the pit must be equal in extent to the visible height.

Linga-making traditions can be traced as early as the Indus Valley Civilisation where many objects have been identified with the Lingas, whose worshippers are referred to as the 'Sisna-devah' in the Rg-veda.[4] Linga-worship was phallic in character which has been condemned in the Rg-veda but in

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1. Agrawala, V.S., Indian Art, fig. 176.
2. Sadhanamala, pp. 585 ff. cf ITL p. 90; TLP 11 pp. 101,299, 301; BI pp. 344 ff.
3. BS lvlii. 53-55. cf VD iii. ch. 74.
4. x.99.3.

course of time it was incorporated in the Aryan society.[1] The two most important lingas are the Gudimallam[2] and the Bhita,[3] both of which are assigned to the first century B.C. The representation of Siva-lingam has also been detected on the coins hailing from Taxila[4] and one from Ujjaini, which also belong to the same age.[5] Another Siva-linga is found from Karamadanda in Faizabad bearing an inscription dated A.D. 436.

The fusian of the Siva form and the Linga form is represented by the Mukha Siva-Lingas.[6] Ekamukhi Siva-Linga, i.e. the Linga-form with a single human face and Pancamukhi Siva-Linga,[7] i.e. the Linga form with four faces in the four directions and the fifth face on the top, are found from Mathura.

SKANDA: The Epic and the Puranic mythology describes Skanda or Kartikeya[8] as the son of Siva. Skanda-Kartikeya was the lord of warfare who gained importance in the early centuries of the Christian era as proved by his representation on the tribal coins and seals hailing from the Eastern Punjab, Ujjayini, Rohtak, Bhita,[9] and Ayodhya; the coins of the Kusana king Huviska[10] and

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1. ETSAI, pp. 7 ff.
2. cf EHI vol.ii, pt.i,pp. 66 ff; HIIA p. 39.
3. cf Ibid. p. 64; Indian Sculpture (Kramrisch) p. 35.
4. DHI pp. 112 ff. cf SSD ch. 70.
5. SI p. 282.
6. Agrawala, V.S., Indian Art, fig. 173.
7. Ibid. fig. 174. Names of the five faces were Sadyojata, Vamadeva, Aghora, Tatpurusa and Isana. Symbolism of these various images is stated in the Visnudharmottara Purana: a) Sadyojata - Prithivi, the latest form; b) Vamadeva - Jala (has been symbolised as female element); c) Aghora - Agni; d) Tatpurusa - Vayu (air, most effective symbol of life); e) Isana - Akasa that overlords over all. V.S. Agrawala remarks: "These have been represented in the five faces of Siva:Linga is the symbol of creation, the universe and the five faces represent the five elements". Indian Art, p. 259 fn.
8. For details see Hopkins, Epic Mythology, pp.229 ff; R.G. Bhandarkar, Vaisnavism, Saivism etc. p. 215.
9. Allan Cat pp. lxxxvii, lxxxix, cxliii; Smith, Catalogue of Coins in the Indian Museum vol i, p. 151, nos.31-32; DHI p. 117.
10. DHI pp. 145-46.

and the Kanakhera stone inscription of the Śaka chief Sridharavarman.[1] The Yaudheyas were the great protagonists of the Kartikeya sect who dedicated their state to the god and the Gana ruled on his behalf.[2] The god on their coins is generally represented in the form of a warrior holding a spear in his right hand. In the account of Varahamihira the image of Skanda is to be done as boyish in appearance, holding a javelin in his hand with a peacock for his ensign.[3] The damaged image of Skanda or Kumara in the Indian Museum at Calcutta depicts his one hand resting on a peacock and another holding a bell and the other two hands are damaged.[4] Varahamihira's description of Skanda's image is similar to the Samaranganasutradhara's Kartikeya.[5]

SIVA'S HOSTS: The hosts of Lord Siva should be drawn having elephantine faces, with single tusks, bulging bellies, a hatchet in their hands and turnips of very dark foliage and root.[6]

SAURA DEITIES: Surya is the only Vedic deity who not only retained but even extended his domain during the period under review. Varahamihira, who was himself a Sun worshipper, records with reverence the need and intricacies concerning the sun icons. The Bhavisya Purana, the locus classicus for our knowledge of the solar cult of the northern variety, gives a graphic account of the

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1. JASB xix. p. 341.
2. Allan Cat. p. 276.
3. BS lvili. 41. cf VD iii. ch. 71.
4. DHI pp. 140-46.
5. cf Vastu Sastra, vol. ii, p. 296.
6. BS lvili. 58.

origin of the cult, the solar deity and his associates, the mode of worship, the solar priests and the solar festivals. Similar accounts are to be found in Samba, Varaha and some other Puranas. A detailed account of the sun worship in India is given in the first chapter under the sub-head 'Solar Cult'.

SUKRA[1] The image of the sun-god has been treated by Varahamihira more elaborately and carefully. According to him, the image is to be attired in the 'northern dress' (Udicya) covering its body from breast to feet. The face should be pleasant and smiling with a halo of bright lustre of gems and drawn with two lotus flowers in his hands, a diadem and ear-rings, a long pearl necklace and a girdle round his waist. The nose, forehead, shanks, thighs, cheeks and breast are to be elavated and an armour should cover his whole body.

Peculiarly enough the height recommended for the image of the sun-god is comparatively less, which varies from one cubit to four cubits. Varahamihira warns the sculptor against any discrepancy in proportions and execution with adverse affects on him. Such a note of caution has been sounded only in the case of the sun-god.

The images of the sun-god that are found in the extant remains of the temples of Surya from Multan down to Cutch have boots reaching upto the knees and a girdle round the waist with one end hanging downwards.[2] The 'headless figure' discovered from Mathura, generally identified with Kaniska, is done in this fashion.[3] The images of sun-god made on the four sides of the temple of famous Konaraka in Orissa follow the same

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1. BS lviii. 46-52.
2. Vaisnavism and Saivism etc. pp. 154-55. cf Agrawala, V.S., A Handbook to the Mathura Museum, p. 52, fig. 41.
3. The Art Heritage of India pl.i c, facing p. 8.

pattern. This form of Surya as already discussed in the first chapter, was imported from outside by the Scythians.[1]

In another tradition preserved in the Visnudharmottara the sun-god is depicted on the chariot drawn by seven horses. In the iconic representation of the sun-god found at Bodhagaya (C. first century B.C.) he is shown riding a one-wheeled (eka-cakra) chariot drawn by four horses and dressed in dhoti and turban. He is attended on either side by a female figure shooting an arrow, represented by Usa and Pratyusa taken from the Indian tradition and Rajni and Niksubha that from the Sassanian tradition under the Sangkritised names.[2]

There were two traditions prevalent in ancient India regarding the fashioning of the images of sun-god, the former being inspired under the foreign influence and the latter being indigenous in approach.

SAMBA: Samba was the son of Krsna by Jambavati. He became gradually associated with Saura cult in India as per the story related in the Bhavisya Purana.[3] It is said that once Samba had an attack of leprosy. Having heard the praises of the Sun god from Narada, he offered worship to the sun and got cured of this hateful disease. Out of gratefulness he resolved to erect a temple of the Sun-god on the bank of the Candrabhaga. No local Brahmana, however, agreed to serve as a priest in that Sun temple. Hence Samba had at last to go to Sakadvipa from where he brought eighteen families of the Maga Brahmana priests to India.

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1. For details see supra ch. 1.
2. DHI p. 432. cf EHI vol 1, pt.11, pp. 306-7.
3. chs. 127-49.

According to Varahamihira, the image of Samba[1] should have a mace in his hand and be done along with his consort holding a sword and shield in her hands.

REVANTA: The Markandeya Purana refers to Revanta as the son of Surya, born out of his union with his consort Samjna, the daughter of Visvakarma, in the shape of a mare in the Uttara-Kuru region. He was born holding a sword and bow, clad in armour,[2] riding on horseback, and carrying arrows and a quiver. Varahamihira's account of Revanta is similar to the one described above.[3] According to him Revanta is depicted as riding on horseback and is shown engaged with his companions in the sport of hunting. A relief in the Laksmanaji temple of Khajuraho has his image.[4]

VEDIC DEITIES

The Brahmanical religion underwent great transformation in the period under review. The Vedic pantheon and the sacrificial form of worship had gradually receded into the background, and the lineaments of Vedic gods had become dimmer and dimmer in course of which most of the gods were relegated to an inferior position and made subordinate to either Visnu or Siva. The first major god to suffer in this way was Brahma whose legends etc. were grafted upon the other two gods of the Trinity. Nevertheless the prescription of making his images as obtaining in the Brhat Samhita as well as the

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1. BS lviii.40.
2. Pargiter Mark p. 575.
3. BS lviii.56.
4. Early Rulers of Khajuraho, p. 202.

Vismudharmottara and the reference to the mode of his worship in the late Padma Purana, show that he still enjoyed considerable importance. Other Vedic gods viz., Indra Yama, Varuna and Kubera were reduced to the status of a Dikpala and came to be known as lords of the east, south, west and north respectively, and likewise Agni, of the south-east; Nirriti, of the south-west; Vayu, of the north-west; and Isana, of the north-east. These Vedic gods also found their way into Buddhism and Jainism. It must be pointed out that though in actual life the knowledge as well as practice of Vedic religion was being gradually restricted to a few, the authority of the Vedas was never denied nor defied. The Vedic sacrifices remained a part and parcel of the orthodox Brahmanical religion during the period.

BRAHMA: The image of Brahma, according to Varahamihira,[1] should be drawn with four faces, seated on a lotus with a water pot in his hand to which Utpala adds two more attributes, dandi (staff) and Krsnajina (hide of black antelope skin as his upper garment). In the works of Kalidasa[2] and in the Puranas the image of Brahma is also fashioned and chiselled with four faces, but is seated on a swan. The description of Brahma in the Visnudharmottara[3] is very elaborate and the symbols associated with it are explained thoroughly. In the Harsa Carita[4] Brahma is described as seated on a full-blown lotus coming out of Visnu's navel and surrounded by Indra and other gods.

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1. BS lviii. 41.
2. Raghu x.73.
3. pt.iii, ch.46.63.
4. HC 1 pp. 7-8, 11,12,18.

The independent images of Brahma are found from various places in India. A well-known figure of four-faced Brahma with two hands in bronze of the contemporary period was discovered from Mirpur Khas, now housed in the Karachi Museum.[1] The image of Brahma in the Siva temple at Aihole is seated on the Padmasana with all the attributes as mentioned by Varahamihira but in another one he is seated on a swan surrounded by many sages now in the Prince of Wales Museum, Bombay.[2] In the art of Mathura Brahma is depicted with four faces, holding his right hand in Abhayamudra. He is a four-armed pot-bellied figure, having a beard and also matted locks on the head.[3] A good many images of Brahma may be seen at the various Museums viz., Mathura, Rajshahi, Madras, Leyden etc.

The worship of Brahma continued in the mediaeval period when his images with Saraswati and Savitri became popular. These images have been found at many centres throughout the country.[4]

INDRA[5] The image of Indra in the account of Varahamihira has a thunderbolt (vajra) in his hand with a third eye placed horizontally on his forehead and is seated on a white four tusked elephant. The iconography of Indra, in the Kusana art

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1. Saraswati, Indian Sculpture, p. 144, fig.110.
2. The Art Heritage of India, pl.87 a, facing p. 137.
3. Agrawala, V.S., Indian Art, fig. 169.
4. For details see Chanda, R.P., Mediaeval Indian Sculpture in British Museum, p. 44.
5. BS lviii. 42. cf SSD ch. 77, 42 ff.

of Mathura, has lot of similarities with the description of Varahamihira. Indra is holding a thunderbolt in his hand and has a third eye over his forehead.[1] The most distinguished feature of Indra images is a high cap on his head. In the Buddhist iconography, however, Indra and Brahma are depicted as attendants of the Buddha.[2] Indra appears under the name of Sakra in Chinese collection. Indra is also a popular deity in the Tantric Buddhism wherein he is described as riding the Airavata elephant with the breast of a woman.[3]

VARUNA: Varuna is the guardian of the western direction. The image of Varuna[4] according to Varahamihira, should be seated on a swan, with a noose in his hand.[5] The Vismudharmottara includes the figures of Ganga and Jamuna on their respective mounts to be shown on the right and the left in the image of Varuna. The deity himself is to be depicted as four-armed, the right hands bearing a lotus and a noose and the left ones a conch-shell and a jewelled-box, respectively. His sculpture from the Rajarani temple of Bhuvanesvara depicts him in a standing posture, holding a looped noose at its ends in his left hand and the right one is done in the Vardamudra.[6] The account of Varuna[7] is somewhat different in the later Tantric Buddhism of Tibet in which he is described as riding a crocodile.

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1. Agrawala, V.S., Indian Art, fig. 181.
2. TLP pp. 89, 178.
3. Nispannyogavali p. 61.
4. BS lviii. 57.
5. pt.iii, ch. 82.
6. DHI p. 527.
7. TLP pp. 98, 178.

KUBERA: Kubera was the 'god of wealth' as well as the king of Yaksas and the guardian of the northern sectors. As per the accounts of Varahamihira[1] the icon of Kubera should be chiselled with a pot-belly, mounted on a human being, and a crown placed on the left side of the head. The image of Kubera of Mathura art more or less agrees with the description of Varahamihira. The Visnudharmottara[2], however, describes him as a Picyavesa and Kavaci[3]. The gilt-copper image of Kubera in the Calcutta Art Gallery is four-armed. His figures as Dikpala, found carved in many mediaeval Hindu temples, represent him as pot-bellied, holding either a bag (obviously of treasure) or squeezing the neck of a mongoose vomiting jewels, and seated on a lotus in the Ardhaparyanka posture, the dangling leg resting upon either two or eight jars[4]. His early mediaeval sculptures in the Mathura art, however, show him as seated on a mountain, holding a drinking cup in his right hand and attended by a male figure on either side[5].

YAMA: Yama was the guardian of the southern direction. Mythologically he was the god of death as well as anger[6]. Yama in the accounts of Varahamihira[7] is represented with a club in his hand and mounted on a buffalo. According to the Visnudharmottara[8], however, he is four-armed and is seated on a buffalo with his consort Dhumrorna on his left lap. He

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1. BS lviii. 57. cf DHI ch. ix.
2. pt. iii ch. 53.
3. The Art Heritage of India pl.40 a, facing p. 65.
4. DHI p. 340. cf Dowson, J., A Classical Dictionary of Hindu Mythology, p. 174.
5. CBIMA nos. 138, 254, 1118 and 1594.
6. Kad pp. 9,38,212, 233.
7. BS lviii. 57; xlvi.10.
8. pt. iii, ch. 51. cf Samarangana Sutradhara ch. 77.42 ff.

is depicted in one of the Paharpur sculptures. Yama was popular in Tibet as well.[1]

BUDDHIST DEITIES

Buddhism, too, underwent transformation from the pristine simplicity of an austere moral code to the most complex system of Mahayana leading to the still later development of Vajrayana. Mahayana, Great Wheel, as the name implies, rallied round the people by opening the gates of admission to all sections of people irrespective of being recluses or householders. The ultra-altruistic principles coupled with the opportunity to worship and devotion furthered the cause of Buddhism and made it an all Asiatic religious movement.

The beginning and the development of the Buddhist iconography are closely knitted with the emergence and gradual expansion of Mahayanism. The session of the Fourth Buddhist Council held during the time of Kaniska synchronises with the emergence of Mahayanism, which marks the first great split in the Buddhist church as well as in its fundamental doctrines. Mahayanism also brought a great break through in the conventional art of the Buddhists by introducing the anthropomorphic representation of the Buddha. Under its influence the aniconic traditions of the early sculptures of Sanchi, Bharhuta and Bodhgaya invariably indicated by means of various symbols, such as the Bodhi tree with the Vajrasana beneath it, the garlanded wheel (Dharmacakra), the stupa of the present or past Buddhas etc., gave place to iconic ones. The iconographic

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1. IIL p. 90.

representation of the Buddha appears simultaneously in the Graeco-Bactrian school of Gandhara and in the Indian school of Mathura.[1] The earlier iconic art of the Saka-Kushan period was lifeless, earthbound, sensuous, and heavy in physicality. It is only in the Gupta period that the art becomes vigorous and lively but restraint. Here the dance of flesh is not over-emphasized as done at Mathura and Amaravati during the Saka-Kushan period. It is an age when the art was simple and fresh, but not weak in technique as to be found in Bharhut, Sanchi and Bodhgaya. It is also here that the artist with all the glitterings did not over-emphasize the minute details of the external form like those of Gandhara. The glorification of mere bodily strength and mundane perfection of form was not the ideal with him. He considered that perfect human-animal was not adequate symbol for portraying the beauty of the divine nature which comprehends all human qualities and transcends them all. It was only by meditating in ultimate perfection that the artist's mind could perceive some glimpses of the beauty of godhead.

BUDDHA: There are scores of sculptures of Buddha ranging from the Saka-Kushana period onwards which are extant. The Buddhist art traditions were prolific during the Gupta age in producing the Buddha images at various centres throughout India. A mention may be made of the one which is regarded as the masterpiece of the Indian art. The Buddha preaching the first sermon, represents the teacher seated in Yoga posture, his hand

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1. For different views on the origin of the image of Buddha, see Agrawala, V.S., Indian Art, pp. 235 ff; The Age of Imperial Unity, pp. 391 ff.

in the wheel-turning or dharmacakramudra, below on the plinth are the kneeling monks and between them is the wheel with two badly damaged figures of deer with a halo carved at the back. Alto-relievo of the Buddha from Sarnath is a fine expression in[1] stone of the meditative and compassionate Buddha giving his first message of deliverance to the world. An image of the Buddha is mentioned in the Mankuwar Stone Image inscription of[2] Kumaragupta.

The underlying idea of the Sarnath image is identical with the description of Varahamihira according to whom the image[3] of the Buddha should have the palms of his hands and soles of his feet marked with lotus, he should be placed in form and his hair should be very short or well arranged or sparce. He should be seated on a lotus seat and should appear as the father of the whole mankind. The philosophy of love and compassion of of Mahayanism is thus displayed vividly in the account of Varahamihira. The art traditions of the mature Gupta age which is characterised by its refinement, clear delineations, and definition of features by curly hairs, Urna - between the two eyebrows, elaborately decorated nimbus and the extremely diaphanus robe clearly revealing the figure, are also well preserved in the description of the image of the Buddha by Varahamihira.

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1. The Art Heritage of India pl. 3a, facing p.8.
2. CII iii pp. 46-47.
3. BS lviii. 44.

JAIN DEITIES

Jainism was of more conservative character and we find little change in its ideas and doctrines during the period under review. By the end of the third century A.D. Jainism had taken firm roots throughout India. "Starting from its original home in Magadha, it had slowly spread to different countries like Kalinga to the south-east, Mathura and Malwa to the west, and Deccan and the Tamil lands to the south."[1] Hiuan Tsang[2] informs us that in the seventh century A.D. monks of both the Svetambara and Digambara sects of Jainism were to be found near Taxila to the west and Vipula to the east and the Digambara Nirgranthas were very numerous in Pundravardhana and Samatata in the east. The presence of Jains in Kathiawar and Gujarat in the early mediaeval period is indicated by literary, epigraphic and archaeological evidence. In the seventh century, two Gurjara kings Jayabhata I and Dadda II were probably Jain patrons. In northern Gujarat, Vanaraja, the founder of the Chapotkata dynasty at Anahillapura, is regarded by Jain tradition as a follower and patron of this faith. Jainism flourished more vigorously in the Deccan and South India.[3] The Gangas of Mysore,[4] the Kadamba rulers of Vaijayanti or Banavasi,[5] the Chalukyas of Badami, all were patrons of Jainism. According to the Jain traditions, the famous Pallava king, Mahendravarman was originally a Jain follower

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1. CA p. 403.
2. Ibid. p. 405.
3. Saletore, R.N., Mediaeval Jainism, pp,. 7 ff.
4. Sharma, Jainism and Karnataka Culture, pp. 9 ff.
5. Altekar, A.S., The Rashtrakutas and their Times, p. 310.

before he was converted to Saivism. The Kalabhras were also regarded as professing Jainism. Hiuan Tsang refers to the Nirgranthas living in the Pandya country.[1] The early iconographic account of Jainism is available in epigraphic records belonging to the Gupta age. There are two inscriptions belonging to the reign of Kumaragupta, one at Mathura (432 A.D.) speaking of the dedication of a Jain image by a lady, and the other at Udayagiri in Malwa (426 A.D.) recording the erection of a statue of Parsva by a private individual.[2] The Kahaum inscription of the time of Skandagupta (461 A.D.) also refers to the setting up of the five images of the Jain prophets in that village.[3] The Paharpur copper-plates of 478 A.D. record the donation of some land by a private individual and his wife, for the maintenance of worship at the Jain Vihara at Vata Gohali, which was presided over by the pupils of the Nirgrantha teacher Guhanandin of the Pancastupanikaya of Banaras.[4] The image of Jina is also mentioned in the Udaygiri Cave inscription of the year 106 G.E.

JINAi According to Varahamihira the image of Jina i.e. Mahavira should be made in nude having a young, handsome and serene face with his arms reaching the knees and his breast marked with the Srivatsa symbol.[5] Similar description seems to

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1. CA pp. 266-67.
2. CII iii p. 68.
3. EI xx pp. 61 ff.
4. CII iii, pp. 268-60.
5. BS lviii. 45.

have been followed by the Silpa texts, the Manasara and the Aparajit-praccha. Hiuan Tsang's remarks are very appropriate in regard to the dependence of the Jainas on the Baddhist iconography.[1] Some of the images of the Jaina Tirthankaras are often mistaken for a Buddha in Dhyanamudra. The only difference is the complete nudity of the Jaina figures which is aptly brought out by Varahamihira. The Srivatsa symbol is another mark of distinction of the Jaina icons. " The Srivatsa symbol is found only on Jaina images and never on Buddha Images".[2] It shows that Varahamihira had good and accurate knowledge about the iconography of Jainism. An image of Mahavira seated in Utthita Padmasana having a Srivatsa symbol and a lotus halo behind the head and hair arranged in short schematic curls with subtle grace and a divine effulgence on the face,[3] is a fine example of the Mathura art. Another fine example is a colossal statue of a Tirthankara in the Curzon Museum at Mathura.[4]

MISCELLANEOUS

As per the account of Varahamihira the images of great Rsis like Veda-Vyasa were also fashioned during the period.[5] The Agamas give an exhaustive account of these images. Varahamihira however, does not give the iconography of these images. He also does not mention the iconographical traits of god Visvakarma, whose images were popular during his time.[6] The images of the

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1. Beal i. 145.
2. Agrawala, V.S., Indian Art, p. 234.
3. Ibid. figs. 143-44.
4. Rowland, pl.81 a,p.132.
5. BS xlvi. 10-12.
6. Ibid. 12.

Pitrs,[1] demons (Raksas), goblins (Pisaca), Yaksas and serpents (Nagas)[2] have also been referred to by the astronomer.[3] The group sculpture consisting of gods along with the figures of boys, girls, women and servants is also hinted at.[4] A beautiful slab from Sondani near Gwaliar represents a gandharva and an apsara, flying through the air.[5] The models of Yaksas were very common during our times. It is very surprising that though Varahamihira refers to the Yaksas etc., he does not give any explicit description of their images.

NINE PLANETS: The worship of nine planets has been in vogue in every part of India with the advance in the field of astrology and the growth of people's belief in things supernatural. They could be propitiated through the performance of Grahayajnas as well as worship of their idols.[6] The idols in the latter case, according to the Agni Purana, should be respectively made of copper, sandal, red sandal wood, gold, silver, crystal, iron and lead or of gold.[7] The iconographical traits of the nine planets viz. the Surya, Candra, Mangala, Budha, Brhaspati, Sukra, Sani, Rahu and Ketu have been given by Varahamihira:[8] Brhaspati is white in

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1. BS xlvi. 10.
2. Ibid. 14. cf EHI p. 549.
3. Ibid. 13.
4. Rowland, pl. 87, p. 136.
5. Ibid.
6. Agni Purana ch. 164.1-2.
7. Ibid. 3-4.
7a. LJ ii. 8.
8. BS xlvi.11. cf VD iii ch. 67; TLP ii.83,89,99,153,178 and 182.

colour and depicted on a frog or a skull holding the rosary and the kamandalu in his hands, Sukra is white in colour and drawn on a lotus, Sani is seated on a tortoise holding a rod and so on and so forth. A number of stone reliefs of the group representation of the Navagrahas are depicted on the walls of the many mediaeval Hindu temples.[1] Almost every Vaisnava temple of Osia bears their group figures. Sometimes the Prabha (halo) of the Visnu image also had the figures of the group of the nine planets.[2] Their separate figures have been found at Sarnath[3] and Paharpur.[4]

ZODIAC SIGNS (Rasis): The twelve signs of the zodiac are depicted by Varahamihira[5] as follows: Mina rasi (Pisces) is drawn with two fishes having their tails back to each other; man carrying a pitcher is the Kumbha; woman with a Vina and man with a mace sitting together is the Mithuna; man carrying a bow in his hand with the body of the horse is the Dhanu; in the Makara, the crocodile takes the face of a deer; girl carrying food and fire seated in the boat is the Kanya; man carrying a balance in his hand is the Tula; and the remainder are denoted by their names for instance the Vrscika (Scorpio) is depicted as a scorpion, the Vrsa (Taurus) as a bull, Simha (Leo) as a lion etc.

It may be pointed out here that the six signs of the zodiac in the Greek counterpart viz., Aries, Taurus, Cancer, Leo,

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1. ASIR, 1907-8, pp. 113 ff.
2. CBIMA No. D.54. The planets preserved are Sukra, Sani, Rahu and Ketu.
3. DHI p. 444.
4. Saraswati, S.K., Early Sculptures of Bengal, pp. 65 ff.
5. LJ 1.5.

Scorpio and Pisces are drawn in the corresponding manner of the Indian system. The Virgo, Libra and Sagittarius signs are very near to the Indian method also. Only the remainder three are differently depicted. It shows that both the systems are either copied from the other or have a common origin.

LUNAR MANSIONS: There are 28 constellations in the Indian Lunar Mansion, starting with Asvini and ending with Abhijit whose figures were also drawn for the purposes of worshipping on some auspicious days. Varahamihira lists these constellations[1] in his text but he does not give their iconography. The Buddhist Tantric Literature[2] is very graphic on the subject.

MATERIALS: The different materials used for the making of sculptures[3], according to Varahamihira, are wood, clay, precious stone, gold, silver, copper and stone.

Wood being perishable, wooden sculptures have not come down to our age. The image of Jagannath (Vişnu) at Puri is made of wood. In the Himachal region, wooden sculptures of various gods and goddesses known as local divinities are still very popular and they are taken out in a procession during the Dussehra days. Clay objects have been able to survive in the shape of terracottas. The sculptures fashioned with precious stones, gold and silver, though practised even in the modern times, are few in extant belonging to the times of Varahamihira. But copper objects have been found from Sultanganj and likewise the bronze sculptures have also been procured. But the most

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1. BS xlviii. 24-28.
2. Nispannyogavali, pp. 63 ff.
3. BS lx.4-5. It was further held that different materials are differently beneficent to the human beings - an idol, made of wood or clay bestows long life, prosperity, strength

contd. next page.

popular material with sculptors has been stone which was harnessed very immaculately throughout the shades of Indian history, the most important being the age of the Guptas and the times of Varahamihira when India reached her zenith and excelled in the classical form. Belonging to this period were the two famous centres of plastic art i.e., the Mathura School and the Sarnath School.

Presently we shall describe, in short, the plastic traditions and attitudes of the contemporary schools of Mathura, Sarnath and other local techniques to bring forth the all round activity and progress in the field of art of sculpture during the time under review. The school of Mathura is the beginning of the classical traditions of Indian art. It introduced refinement in the Kusana art and succeeded to a great extent. The plastic traditions of Mathura are typically preserved in a Bodhgaya image of the Bodhisattva,[1] which is said to be "the first image in India which by its form signifies what its name implies".[2] The image acquires serene and easy attitude and the body has been fully brought under discipline. Plastically it has a soft and delicate modelling with easy and flowing contours and melting planes.[3] It can easily be called the prototype of the artist of Sarnath.

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and victory; precious stone tends to the weal of the world; gold, health; silver, fame; copper, increase of children; and an idol or emblem of Siva (Linga) made of stone, acquisition of immense landed property. Ibid.

1. HIIA fig. 291.
2. Kramrisch Sculpture p. 61.
3. Ibid.

The most conspicuous drawback of the Mathura artists is the lack of spiritualism or the conquest of the inner world. This deficiency is amply compensated at Sarnath, which is said to be the climax of the classical art of India. Plastically the body becomes relaxed, delicate, soft, full and round, smooth and refined. Sarnath produced a large number of sculptures out of which the most important is that of the Buddha sitting in the dharmacakrapravarttanamudra[1] in high relief which is considered to be the masterpiece of Indian art of all periods and ranks among a few in the world. Sarnath specialised in the grey chunar sand stone which had been used earlier by the Mauryans.

The centres of Mathura and Sarnath form the nucleus of the Gupta classical traditions[2] which engulfed the whole of India in the course of time and also became prolific in producing many good sculptures on the pattern of the classical school. From the Madhya Pradesh we have the image of Kartikeya[3], the head of Siva or Lokesvara[4] from Khoh, the Eka-mukha linga[5] from Khoh, the Apsaras[6] from Gwaliar, the Ganga[7] from Besanagar and the

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1. The Art Heritage of India pl.3 a facing p.8.
2. Grousset, R., Civilisations of the East, vol.ii, India, pp. 141-42.
3. Housed in the Bharat Kala Bhavan, BHU Varanasi. HIIA fig 175 and CA pl. xx.44.
4. In the Sarnath Museum, HIIA fig. 171; CA pl.xxi.fig.46.
5. CA pl. xxi. fig 48; MASI no. 16 p.5.
6. HIIA fig. 291.
7. In the Museum of Fine Arts, Boston, USA Saraswati fig. 97.

sculptures of the Siva temple at Bhumara,[1] which follow the Sarnath plastic conception. They differ in having relatively heavy and broad figures. The modelling is also terse. A few examples belonging to different traditions altogether may be seen in the sculptures of the Dasavatara temple at Deogadh[2] (Jhansi district, U.P.); Garhwa[3] near Allahabad; the Siva-Parvati relief[4] from Kosam; an image of Buddha from Mankuwar,[5] Allahabad district; a panel depicting the Krsna-Govardhana-Dharana from Mandor[6] and door panel from Nagari.[7] Plastically they betray a tendency to hardness. They are also sturdy and broad-body type.

From the Eastern sector of India we have the classical copper image[8] of the standing Buddha from Sultanganj, Bhagalpur district, Bihar; the bronze image of the Buddha

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1. MASI no. 16.
2. CA pl. xxii fig. 50; Saraswati fig. 112 and 120; HIIA fig. 167.
3. In the Lucknow Museum CA pl xix. figs.40-42; Saraswati fig. 99.
4. CA pl. xxiii fig. 53.
5. Saraswati fig. 91.
6. HIIA fig. 166; CA pl. xxi fig. 47.
7. Kramrisch Sculpture fig. 61.
8. In the Birmingham Museum HIIA fig. 160; CA pl. xxv fig. 58.

from Nalanda[1]; the stone image of the standing Buddha from Biharail[2]; the stucco reliefs of the Maniyar Math[3]; Rajgir, Bihar; the two stone images of the river goddesses of Ganga and Yamuna from Dah Parvatiya[4], Tezpur. These specimens follow up the classical traditions coupled with the local traits[5] eventually dragging to over emotionalism.

We find a strange phenomenon when we enter the Deccan and from there to further south, where the influence of the classical traditions goes on dimishing and the trend is towards hugeness.[6] The reliefs of Kanheri, Karle,[7] Aurangabad and Aihole,[8] and the plastic treatment at Ajanta are, no doubt, sensitive, and have a quiet poise and balance but are very far from the spiritual outlook of the classical sculptors. The same tendency seems to have been followed at Parel and Badami.[9]

This short survey leaves no doubt in our minds that the age of Varahamihira was very prolific in the field of plastic art which was fashioned according to the iconographical rules, some of which were laid down by Varahamihira.

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1. In the Nalanda Museum CA p. 523.
2. In the Rajshahi Museum Saraswati p. 142 fig. 103.
3. CA pl xxv fig. 57.
4. Ibid. pl.xxvi figs 60,62; ASI 1924-25 pl xxxii a & b.
5. cf Kramrisch Sculpture p. 68.
6. CA pl.xxvii fig.64; HIIA fig. 164.
7. Ibid. fig. 63.
8. HIIA fig. 154; CA pl xxix figs.68-71.
9. CA pl xxviii fig. 65.

SECTION IV

PAINTING

Painting is one subject on which Varahamihira is not very exhaustive. He does not allude to this branch of fine art so elaborately as he does to Vastuvidya or Pratima-laksana or Prasada-laksana. This omission should not lead us to think that the painting was not popular during his times, or he was ignorant about its technique. It is not so as the Kamasutra (a contemporary text) is very explicit to the fact that the art of painting was a sine qua non for every Nagaraka.[1]

The activities in the field of art of painting during the times under review were very hectic for the number of the extant remains though not enormous as compared with the finds of sculptures, but a number of very good specimens from the strokes of master-painters have survived to show their efficiency and dexterity on the walls of the cave temples and other places.[2]

The age of Varahamihira was equally prolific in producing literature concerning the art and technique of painting.[3] An

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1. pp. 32,44 Benaras ed.
2. Bedsa caves (3rd century A.D.), Kanheri (cave xiv, 6th cent. A.D.), Aurangabad (cave iii and vi 6th century A.D.), Pitalkhora (caitya cave i 6th century A.D.), Bagh (notably cave iv c.500 A.D.), Ajanta (caves i,ii,xvi,xvii,xix), and Badami (cave iii, 6th century A.D.) which are situated in the Deccan. In South India we have paintings in the rock-cut temples at Tirumalaipuram (Digambara Jain, 7th century A.D.), Sittannavasal (Jain, 7th century A.D.) and Kancipuram (Saiva, Kailasanatha temple, 7th century A.D.). In Ceylon in the rock cave at Sigiri (6th century A.D.)
3. The VD is the most stupendous work on paintings. cf Artibus Asiae iv pp. 41 ff.; IHQ ix 1933 pp. 898-911; JOR vi 1932 pp. 184-87; vii 1933 pp. 59-82; vii 1933 pp. 160-85 and 331-350; viii 1934 pp. 31-45.

earlier writer on the subject mentioned by Varahamihira is Nagnajit whose work unfortunately is not traceable.

The art of painting i.e., Citrakarma as Varahamihira denotes it, was considered as an essential social accomplishment[1] during the age. Kala[2] or fine arts which includes painting,[3] is one of the characteristics of Rajas quality of human nature.[4] According to the Visnudharmottara,[5] the painting is the finest of fine arts, it bestows all kinds of merits accruing from Dharma, Artha, Kama and Moksa.

With a number of references to the art of painting and painters,[6] the various colours used in the Citras and the descriptions of some of the paintings along with the Vajralepa and iconography we can draw a picture of the times of Varahamihira regarding the development of the mode and technique of painting which can be supplemented with the contemporary texts and extant remains already referred to.

TECHNIQUE OF PAINTING: Varahamihira seems to have been aware of the technicalities such as surfaces, processes, materials, and colours necessary for executing a good painting.[7] The astronomer mentions two types of Vajralepas, one the method of

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1. BS lvii.14.
2. Ibid. lxix.8.
3. Kama pp. 32,44 Benaras ed.
4. cf. BS lxix. 8-9; lxvii.12.
5. Pt. iii ch. 40.
6. Citrakrta BS lxxxvii.40.
   Citrakara Ibid. v.74; ix.30; lxxxvii.15.
   Citrajna Ibid. x.10.
   Alekhyajna Ibid. xvi.17.
7. BS lvii. 1-7. cf VD pt.iii ch. 40.

preparation of the ground for murals in the technical sense and the other preparation of cements or plaster for the wall in the general sense. The recipe for the preparation of Vajralepa is described thus: prepare a levigated powder with lac, the resinous exudation of the Pinus Devadara, the Balsamodendron Mukal, the Feronia Elephantum, the kernal of the fruit of the Aegle Marmelos (the bel), the Diospyros Embryopteris, the Neem (Azadirachta Indica), the Mhow (Bassia Latifolia), the Indian madder (Rubia Manjistha), the Phyllanthus Emblica, and the resin of the sala tree (shorea Robusta), then make a decoction of this in 256 palas of water reduced by boiling to 32 palas, and apply the hot decoction on the wall.[1]

The second recipe Vajratala is made out of gelatitine as principal ingredient with the horns of cows, buffaloes and goats, asses' hair, buffaloes' skin with Gavya (cow urine), the Neem and the Feronia Elephantum.

Two more plasters one akin to the Vajralepa and the other was called matallic plaster, Vajra-samghata.[2]

It may be pointed out here that Varahamihira does not specifically mention that these plasters are meant for the purposes of wall paintings. Since the principal ingredients of the mixture are lac, gum and turpentine, it may be used for the same purpose. The Visnudharmottara is more or less identical with the account of Varahamihira and the Samarangana-Sutradhara also follows the same. But it is very curious that the extant remains do not seem to have used any of such plasters, for at

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1. cf VD p. 116 Shah Tr.

2. cf SSD ch. 72.

Ajanta the ground was prepared by a mixture of clay, cowdung, pulverised traprock applied to the walls and thoroughly pressed in. Rice-husk was also added to the above mixture. The thickness of the first layer varied from one-eighth of an inch to three-quarters of an inch. Over this a coating of Gunam[1] was applied.

The figures of monsters and ghosts drawn on walls of the houses as referred to by Varahamihira[2], were not considered auspicious. The portrait of the owner of the house was sometimes executed[3] on the walls of the house.

The canvas painting was also in vogue.[4] We find that the banners were painted with multi-colours.[5] The practice of drawing floral and geometric designs on the earthen pots was also prevalent.[6] It is very unfortunate that Varahamihira does not furnish the process as to how the painting on the canvas or the earthen pots was done.

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1. Griffiths, The Paintings in the Buddhist Cave Temple of Ajanta vol 1 p.18. cf Rupam October 1921 pp. 13-15. For the mural paintings of the temple of Brhadisvara at Tanjore (built during the regime of the Colas), a mixture of lime and sand was used for preparing the ground. See Paramasivam S., The Mural Paintings in the Brhadisvara Temple at Tanjore. Indian wall paintings of this period are fresco secco and not true frescoes or fresco buono. Ray, N.R., CA p. 541. But the Mughal paintings may be termed as fresco buono , which was also followed by the present Jaipur school of fresco. Havell, E.B., Indian Sculptures and Paintings.
2. BS xlvi. 78. cf Raghu xvi.16. Visakhadatta uses Bitticitra denoting mural painting (CA pp. 39-40) whereas Rajasekhara places citra-lepya-krit or mural painters (as distinguished from Lekhya-citra) in the category of Apabhramsa poets (Ibid.).
3. Ibid.
4. YY vi.10. BS lxxxvii.40.
5. BS xliii.46. cf Raghu vi.72. MP 19. cf Motichandra, Mughal Painting pp. 9-10.
6. Ibid. x.10.

ICONOGRAPHY: The canons of iconometry which have already been described, were identical in painting as well as in sculpture with some exceptions, for instance, the head in sculpture was done 32 angulas in circumference and 14 angulas in length, while in a painting only 12 angulas (of circumference) were to be visible and the remaining 20 invisible.[1] However, the description of the various types of men as well as the anatomy of the figures of women serves the painters better than sculptures in drawing elegant, soft and beautiful figures.

Varahamihira mentions a number of deities which were drawn in various colours for the purposes of worship[2] i.e., Skanda, Vismu, Visakha, Lokapalas, viz., Indra, Agni, Yama, Nairti, Vayu, Kubera and Aisana; Surastrya (divine ladies) like Indrani, Gauri and Laksmi[4]; the figures of the planets with all the stars, Rudras and Mothers (seven in number). The figures of Nagas, Yaksas, Manes (Pitr) Gandharvas, Apsaras, Sages and Siddhas were also drawn in the religious ceremonies.

The artists of the Gupta Age use the human figure to express their part. It is the youth, the prime of life when it bubbles with activities. The Gupta painters, sculptors, writers - each of them has chosen the youth as the medium of expression and Varahamihira is no exception to the rule. Bhasa, Kalidasa, Vatsyayana etc., are very eloquent on the subject and Varahamihira only confirms the prevalent views by including such chapters as deal with the subject.

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1. BS lviii.14. cf. VD iii ch. 40.
2. Ibid. xlviii. 24-28. cf. VD pp. 40-42 Kramrisch Tr.
3. Utpala.
4. Ibid.

A youthful figure of a maiden, a utopia of many poets, has, according to Varahamihira,[1] a slender waist bending under the weight of the bosoms; a navel with turns from left to right; thighs similar to plantain trees with fine buttocks and excellent loins; lips, red; hands and feet as tender and charming as lotus-petals; and hair resembling the belly of the bees. The personification of beauty in the words of Varahamihira is classic in itself.

COLOURS: Colours like pink, yellow, blue are mentioned.[2] The primary colours seem to have been white, red, yellow, and black.[3] Kumkum[4] was also popular for drawing and Pit-kusum[5] is another denoting yellow-kusum. Perfumed colours are also mentioned.[6]

The industry for making colours and dyes[7] has been referred to by Varahamihira. Most of the colours, it seems, were manufactured from the flowers. From the indigo plant was extracted the blue colour[8] : 'Gerika', imported red colour and char-coal, black.[9] Both water colours and oil colours appear to have also been in use in paintings.[10] Kalidasa

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1. BS cv.10-12.
2. Ibid. xxxv.4.
3. Ibid. xlvii.25 and xxxv.3. cf Utpala. According to the VD (pt.iii ch.27.8), the primary colours are white, red, yellow, black and green. Mixing of colours is described in ch.40 verse 16. Bharata follows the same.
4. Ibid. xlii.10; xliv.5.
5. Ibid.
6. Ibid. xlviii.27.
7. Ibid. xvi. 18. cf VD pt.iii ch.40. Dyes and colours were prepared from the natural dyes with the help of the chemicals (Utpala xlviii.28).
8. Silparatnam (ch.46.119-30) describes the preparation of vegetable and mineral colours.
9. BS xlvi.73.
10. Ibid. xliii.48.
11. Mal i.

emphasises the importance of the fast colours which do not fade away quickly.

He does not mention the classification of painting viz., Satya (Realistic)[1]; Vainika(Lyrical); Nagara (Secular); and Misra (Mixed), nor the elements of painting viz., Rekha, Vartana[2], Bhusana and Varna[3] nor the sadanga (six limbs of painting) viz., Rupabheda (distinction of types), Pramana (ideal proportions), Bhava (expression of mood), Lavanyayojana (embodiment of charm), Sadrsya (points of view), and Varnikabhanga (preparation of colours).

Whatever the views of Varahamihira may be on the technicalities of the subject, the extant paintings of the age of Varahamihira betray the same sense of maturity and balance as its counterpart in sculpture.[4]

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1. VD iii ch.41. 1-4. The Manasollasa or the Abhilasitartha Cintamani, however, give five-fold classification of painting, viz., Viddha, Aviddha, Bhava, Rasa, and Dhuh Citra (VS ii p. 386). cf Rupam nos. 37 and 40; JAOS vols. 51-52.
2. Ibid. ch. 40.10.
3. Eastern Art iii pp. 218-19.
4. For details see Goetz,H., 5000 Years of Indian Art pp. 104-7.

SECTION V

MUSIC

Samgita which literally means 'unity in Gita' is the term for music used by Varahamihira.[1] Nrtya, Vadya and Gita i.e. , dancing, playing on musical instruments and singing respectively - these three together constitute Samgita. According to Varahamihira music is the quality of 'Sattva' and a man endowed with such a quality possesses a good character. This goes to suggest that the musicians enjoyed good reputation in the society.

CLASSIFICATION: Varahamihira mentions both vocal(gita[3] or geya[4]) and instrumental (vadya[5], vadita[6], vadana[7], vaditra[8]) types of music.

SVARA: The basic element of music is sound, which is manifested in the form of tones and microtones. Svara denotes a pitch of a sound plus expression. It is rendered in English as 'note'. It has been defined as ' a smooth charming and continuous sound originating after the Sruti (microtone) which pleases the listeners by its own virtue'.[9]

The use of the word 'svara' in the sense of 'seven'[10] shows that Varahamihira was familiar with the standard number

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1. BS lx. 15.
2. Ibid. lxviii.112.
3. Ibid. xxxii.23; xlvi.61; lxxxvi.22,39; CI.12; BJ xiv.4; xvi.12; xvii.3.
4. Ibid. v.39; 74; x.3. BJ xviii.1. cf VD iii. ch. 18.
5. BJ xviii.1.
6. BS xxxii.23.
7. Ibid. x.3.
8. Ibid. lxxxvi.22 cf VD iii ch. 19.
9. The Story of Indian Music 1961 pp. 27-28.
10. BS xii.15; PS i.15. cf ME ii p. 353.

of musical notes of seven. Four svaras out of seven mentioned by him are[1] : Sadja, Madhyma, Gandhara, and Rsabha. It is very difficult to say why the note-names were called Sadja, Madhyma, Gandhara, Rsabha etc. The Indian traditions hold that these notes evolve out of the vital air, which comes in contact with the different internal parts of body. Thus according to the Mandukasiksa[2], the note Sadja is born when the vital air is in friction with throat, Rsabha emanates from the seat of the head, Gandhara from the nose; etc. The Naradisiksa[3], however, gives a more rational and tenable view that when a column of air in its course touches the nose, throat, lung, palate, tongue and teeth and produces a note, it is called Sadja i.e., born of six. When again the air column, starting from the naval, touches the throat and the crown of thehead thereby producing a sound similar to the bellowing of a bull it is called Rsabha, etc. According to the modern researches, the voice is a transformation or equivalent of the respiratory movements.[4]

The seven notes of Kuchean music, presumably adopted from the Indian system known from the Chinese sources[5] were: Ki-che (long tone); Sha-che (simple and straight tone); Sha-hou-kia-lan (consonant tone); Sse-lou-she (tone of the bull); Sha-la (consonant and Harmonious tone); Pan-chen (fifth tone). Of these Sha-che is Sanskrit Sadja; Sha-hou-kia-lan, Sahagram;

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1. BS lxxxvi. 40; BY xxiii.36; YY xiv.20. According to Utpala the Gandhara note is sung only by the gods and gives seven svaras as Sadja, Madhyma, Gandhara, Rsabha, Pancama, Dhaivat and Nisada. (Utpala lxxxv. 40). cf VD iii. ch. 18.
2. HDIM p. 26.
3. vs. 7-12.
4. Pingle, BA. NIM 1962 pp. 10 ff.
5. India and Central Asia p. 87.

Pan-chen, Pancama; and Sse-hou-li-she, Rsabha. It is difficult to identify the remaining names with the Indian counterparts, but there is no denying the fact that their source was Sanskrit. The abbreviations of these note-names by their first syllables, viz., Sa.Ri,Ga,Ma,Pa,Dha and Ni, made it possible to sing them forward and backward quickly and easily.

Three Gramas[1] Varahamihira mentions three Gramas, viz., Madhyma, Sadja and Gandhara. Bharata, in his Natyasastra, differs from Varahamihira in the number of Gramas which according to him are only two i.e. Sadja and Madhyama while the Visnudharmottara[2] follows the view of Varahamihira. The Samgita Ratnakara[3] also refers to three Gramas and mentions Sadja and Madhyma as current but describes in detail the Gandhara Grama.

Theory[4] The name of 'gamut' (or Saptak) is given to a series of seven sounds which succeed each other, proceeding from the grama to the acute, or vice-versa. These sounds are comprised between two extreme notes having the following character, viz., the highest sound is produced by double the number of the vibrations of the lowest. The most acute note being the eighth of the series, the two extreme notes are the octave of each other one being the lower octave and the other higher one.[4]

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1. BS lxxxvi. 40. cf Utpala. Dattila also gives two but mentions the third namely Gandhara adding that it is not found in this world (Shah Tr. VD iii. p. 32).
2. pt. iii ch. 18.
3. c. 1242. HA Hopley (Music of India) states that Sadja and Madhyma Gramas are found in the Natyasastra of Bharata, while Gandhara Grama is not mentioned until the Samgita Ratnakara. This statement is not correct in the light of the above fact.
4. Pingle, B.A., op.cit., pp. 28 ff.

Gramas were the scales which were replaced by Murcchanas[1] or the series of seven ascending notes. They are the basis of the melody or a raga, in fact they are the melodies or ragas in themselves.[2] Raga[3] is defined as a combination of notes, illustrated by melodic movements which is capable of producing pleasant sensations. According to another definition a Raga is called a Giti when it is possessed of ten attributes.[4] Relations of Rasas with the musical notes are given in the Visnudharmottara.[5]

MUSICAL INSTRUMENTS:[6] Following Musical instruments have been mentioned by Varahamihira: Vina,[7] Vallaki (lute),[8] Venu (flute),[9] Mrdanga,[10] Muraja (tabor),[11] Turya (trumpet),[12] Gonga (Ghanta),[13]

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1. The VD(iii ch.18) mentions 21 Murcchanas dependent upon three Gramas. Kalidasa (MU 91) also mentions Gramas and Murcchanas.
2. For details see HDIM pp. 33 ff; Pingle, B.A., op.cit. pp.45-64; SIM pp.55 ff.
3. By Matanga Brhaddesi, quoted in SIM p. 55.
4. By Kallinath quoted in HDIM p. 88 fn.8. cf Samgita Ratnakara iv.373-78. See also Fox-Strangways, A.H., The Music of Hindustan; Jones, Sir William, Music and Musical Modes of the Hindus; Harrison C., Ancient Art and Ritual; HIIA; Danielou Allain, the North Indian Music; Huxley, J., The Uniqueness of Man; Jeans, Sir James, Science and Music.
5. iii. ch. 18.
6. The VD mentions four types of musical instruments - Tata, Susira, Ghana and Avanaddha i.e., stringed, wind, metalic and stretched (e.g. drum) respectively (iii ch. 19).
7. BS xix.18; lxix.22,29; YY ii, 15,19. cf Priyadarsika Act iii. p. 57; HC p. 193.
8. Ibid. lxxvi.2. cf Utpala xix.18.
9. Ibid. xix.18; YY ii.19.
10. Ibid. iv.19; xliii.59; xliv.23; xlviii.49; lxviii.95.
11. Ibid. lxix.22.
12. Ibid. xliii.24; xliv.7; xlviii.49; lx.16; lxxxvi.39; YY ii.19. cf HC p. 110.
13. Ibid. lxxxvii.26.

Samkha[1] (conch-shell), and various varieties of drums as Pataha,[2] Dundubhi,[3] and Bheri.[4] The word Turya[5] sometimes seems to denote musical instruments in general also. There are references to musical instruments which produce sounds without being struck, or produce no sounds even being struck or produce multifarious notes.[6] They seem to be un-natural and are held as inauspicious.[7] Kalidasa refers to a number of musical instruments. Hiuan T'sang[8] mentions the sounding drums and blowing horns, and playing on flutes and harps.

The contemporary paintings, reliefs and sculptures depict various kinds of current musical instruments. Some of these musical instruments can be seen in the sculptures of the 'Siva temple at Bhumara, ascribed to the 5th century A.D.[9] From

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1. BS xliii.24,59; xliv.7,16; xlviii.49; lx.16; lxxxvi.39. cf HC p. 110.
2. Ibid. xliii.59.
3. Ibid. xliii.34; YY viii.16. cf HC p. 110.
4. Ibid. 59; lxviii.95. The Kucheans used the gong, the drum called Kie, mao-yuan, tu-t'an, the cornet of reed called pi-li, the transversal flute called heng-ti, the sphinx-headed lute called K8ong-hu, the guitar p'i-pa which has five cords, the cymbals and the conch (India and Central Asia p. 88.).
5. Ibid. xlvi. 61,62; lx.10.
6. BS xlvi.62.
7. Vina, Raghu viii.33, M.P. 45; Venu, Raghu xix 35; Vamsakrtya, Raghu ii.12; Mrdanga, Raghu xiii.40,xvi.13; Mal.21; Puskara (tabor), Raghu xix.14. MU 3, Mal 21; Muraja, Ku vi.40, MP.56, MU 1; Turya, Raghu iii.19, vi.9,56, x.76, xvi.87, Vik iv.12; Samkha, Raghu vi.9, vii.63,64, Ku i.23; Dundubhi, Raghu x.76; Ghanta, Raghu vii.41.
8. Watters i p.152; Beal i p. 218.
9. On some of the fragments of the dado are preserved three kinds of drums: one short, and the other longer, both which, tied to the ends, were slung on the shoulders by means of strings or straps (a and b). These were cylindrical, while the third type was long, narrow in the centre, but broad towards the end (a, first row). Cymbals were also in use for there is sculpture of a dwarf who plays with them (b, second row). Conches can also be seen (c, third row), while the Kahal or timbrel also appears to have been popular. (MASI no.16 pl.ix, a,b,c). cf LGA p. 453.

the paintings at Ajanta cave No. XVII, we find a number of musical instruments viz., long-stringed with a gourd at the bottom, cymbals, and lengthy straight flutes. Also are three kinds of drums.[1]

MUSIC AND LOVE: Music was evolved to charm and call the opposite sex. A lute has been described as the food of love in exciting the tender feelings of heart. Young men drinking wine with their beloveds and enjoying melodious songs being sung to the accompaniment of lute and flute[2] remind us the picture of Umar Khyam's philosophy of music, woman and wine.[3] Kalidasa mentions the wife of Yaksa who was well-versed in all sorts of music. After separation, music was her only medium she could express her love for her husband.

MUSICAL CONCERTS:[4] The term Dindibhanda denotes musical concerts wherein instrumentalists played on different kinds of instruments such as Pataha, Mrdanga and Karata.[5] Sangita-sala i.e., the concert hall has been mentioned by Kalidasa[6] where probably the concerts mentioned by Varahamihira were held.

MUSIC AND RELIGION: Music plays a dominant role in invoking the gods at the time of worship. It is called temple-music which is still practised all over India. Songs are sung in the praise of various gods with the accompaniment of different musical instruments such as Mrdanga, Samkha, Vina and Venu.[7]

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1. For details see Griffiths, Ajanta Paintings 1.60,75.
2. BS xix.18; lxxvi.2.
3. MU 23. It is held by Dr. Samman that' we can concentrate greater intensity of feeling in a single musical note than any pages of writing'. Quoted by Pingle, op.cit. p. 15.
4. BS lxxxvii.12.
5. Utpala lxxxvi.12.
6. Sak p. 150; Mal pp. 4,6.
7. BS lx.10. cf Kalidas (MP 35) refers to the temple of Mahakala in Ujjayini resounding with the sound of musical instruments such as mrdanga etc.

The religious processions taken out in the city at the time of some festivals included bands of songsters, actors and dancers.[1] The instrumentalists, of course, being the part and parcel of the above team accompanied such processions.[2] In almost all the religious ceremonies music, instrumental as well as vocal[3] played a definite role.

MUSIC AND MILITARY: To gladden the elephants taking part in the battle, sounds of tabors and conch-shells were harmoniously played.[4] A band consisting of mostly the instrumentalists handling high sounding instruments such as Mrdanga, Dundubhi, Bheri, Conch-shells etc., playing the Vira-rasa tunes preceded the Digvijayayatra (military march)[5]

SECULAR MUSIC: Music enchants the whole society. The people at large were favourably inclined towards vocal music (Gita -[6] priya, Gitasakta).[7] A class of expert musicians were known as Gandharvas.[8] There were expert vocalists (Geyajna)[9] and instrumentalists (Vadaka).[10] Melodious songs were sung to the accompaniment of flute and lute,[11] enveloping the forests and mountain slopes.[12] Clapping of hands (Talasabda)[13] were also in vogue among the young ones. It is laid down that an instrumentalist should possess a good voice.[14] The high proficiency and popularity of

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1. BS xliii.26.
2. Ibid. lx.16.
3. Ibid. xliii.24,26; xliv.7,16; xlviii.49; lx.10,16.
4. Ibid. xliv.23; YY xii.4.
5. Ibid.
6. Ibid. ci.12; BJ xiv.4; xvi.12; xvii.3.
7. Ibid. v.39,74.
8. Ibid. xv.9,12; xxxi.11; lxxxvi.33. Also Gandharvavid BS xvi.17; xix.10.
9. Ibid. x.3; xix.6; xliii.26.
10. Ibid. x.3.
11. Ibid. xix.18.
12. Ibid. xlvi.91.
13. Ibid. xix.23; xliii.28.
14. YY ii.5.

music during the times of the Guptas can be ascertained from the lyricist type of Samudra Gupta's coins which depict him sitting on a high-backed couch playing on a vina lying on his knees,[1] which is supplemented by the account of his Allahabad Prasasti.[2]

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1. Allan, Catalogue pl.v. cf LGA p. 453.
2. CII iii pp. 14,15, text p. 8.

SECTION VI

DANCING

The art of dancing is pre-Aryan in origin on the soil of India.[1] The dancing bronze model of a woman of the Harappan ti: es alludes to a very advanced state of technique and mode of dancing. The statuette in question is naked but for a necklace and a series of bangles almost covering her left arm, her hair dressed in a complicated coiffure, standing in a provocative posture, with her right arm on the hip and her left lanky leg slightly bent.

In the ancient contemporary civilisation the art of dancing developed very much in the temples and was kept alive by the female worshippers of the temples. They were known as "temple dancers or prostitutes, or Devadasis".[2] Kalidasa refers to the temple dancers employed in the temple of Mahakala at Ujjayini. They were regular servants of the temple whose main occupation was the dancing performance in honour of Siva. The association of Lord Siva with the Tandava mode of dancing further makes us believe that the art of dancing must have originated among the non-Aryans in India and it was in a developed state among the people of the Harappan civilisation whose presiding deity was 'Siva or Proto-Siva'.[3] According to the Indian traditions also Siva is the first dancer who is given the epithet of

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1. VA vol i pl.
2. MP 35.
3. " A great motif in religion or art, any great symbol becomes all things to all men; age after age, it yield, to men such treasure as they find in their own hearts". The Dance of Siva, p. 56.

Nataraja[1] and is associated at least with eight different dances of India.[2]

The Aryan origin of the Indian dance is promulgated in the Natyasastra,[3] where Brahman is referred to as the originator of dance and drama. Both the traditions are synonymous regarding the religious origin of the art of dancing.[4] Most of the dances of India are either associated with Siva or Krsna preserved in Krsna Lila.[5] Even the dances of the Apsaras are associated with the gods or their land.

The Gupta Age is the consumation of dance traditions[6] the history of which is traceable from the written records since the age of the Rg-Veda.[7] It was also very popular in the so-called Buddhist age[8] in which it was handled meticulously by the courtesans who were supposed to be well-versed in dancing. In the contemporary times of Varahamihira several modes of dancing were prevalent. The Natyasastra mentions various divisions and

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1. The bronze sculpture of "Nataraja type is one of the great creations of Indian art ... The movement of dancing figure is so admirably balanced that while it fills all space, it seems nevertheless to be at rest". HIIA.
2. Bannerji, P., Dance of India p. 22. Eight types of dance are: Ananda Tandava or the Joyous dance; Sandhya Tandava or the twilight dance; Kalika Tandava, dance of the slaying of demons of evil and ignorance; Tripura Tandava, dance of the slaying of demon Tripura; Samhara Tandava, the dance of destruction; Gauri Tandava, dance with his consort Gauri; Uma Tandava, dance with Uma; Urdhava Tandava, dance of Siva with Kali.
3. xxxvi.77-79.
4. Customs of Mankind, p. 471.
5. cf Mackenzie, D.A., Indian Myth and Legend.
6. Goetz, H., 5000 Years of Indian Art pp. 99-100
7. RV x.76; Katyayana Srautasutra, 21.3.11.
8. Cowell and Neill, pp. 544 ff.

details of the dancing. Kalidasa refers to 'Chalika'[1] type of dancing. 'Five-limb dance'[2] was another kind of dance mentioned by Kalidasa. A similar dance seems to have been referred to in the Chinese sources which was performed by the Kuchean Ballet troupe which visited China, and was known as the 'Dance of the Five Lions'[3].

It is again very unfortunate that Varahamihira does not refer to the technicalities of dancing which it seems were not in his purview. But nevertheless he refers to dancers at many places who used to take part in the religious processions and assemblies[4]. Dancing as a means of livelihood has been mentioned by Varahamihira[5] also. The prostitute class made well use of dancing in their profession to entice people and extract money thereby.

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1. Mal pp. 4-6,21,24.
2. Ibid. p. 14.
3. India and Central Asia, p. 88. Each lion was made of 12 men and had a special colour. The demonstration required the assistance of 140 dancers. It was accompanied with the music.
4. BS xliii.26.
5. Ibid. v.74.

SECTION VII

DRAMATURGY

Music, dance and drama supplement each other to make an enactment successful and effective. All these three branches of fine arts have long been charming the audience of India on festive days and other gala occasions. The dramaturgy had reached the acme of its life in the mature Gupta Age i.e., the 6th-7th centuries A.D. in which lived the astronomer Varahamihira. It was the saturation period of Indian theatrical performances. Gupta age produced many dramatists and the greatest dramatist of India Kalidasa was the product of this age who represents the Augustan age of Indian drama.

The Natyasastra of Bharata was the first technical text dealing with the dramaturgy and dancing.[1] It was the most popular book in the Gupta times. Kalidasa refers to Bharata as the founder of the dramatic art.

Varahamihira uses the term 'Nataka'[2] to denote drama and Nata,[3] an actor. Utpala, while commenting on these terms renders Nataka as Nartanam[4] and Nata as Nartaka.[5] But when the two terms Nata and Nartaka occur together,[6] he fails to differentiate between the two. Now the question arises, why these terms have not been explained? Are they synonymous? For a proper understanding first we would discuss three similar

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1. Vik ii. 17.
2. BS civ. 61 d.
3. Ibid. x.10; xv.9; xvi.20; xliii.26.
4. Utpala ciii.61.
5. Ibid. x.10; xv.9; xvi.20.
6. BS xliii.26. cf Utpala xli.26.

terms viz., Nrtta,[1] Nrtya and Natya.

Nrtta is a dancing pure and simple, unaccompanied by gesture or language. This resembles to a great extent with the society dances and ballets in the west. Nrtya is gesticulation or expression without language. It is an expression dance known as Bharata Natya or Nartan. Without dancing, it is called histrionics.[2] Natya is dramatic representation with song, dance, expression, speech and scenery combined. As drama is a combination of acting, dance and music, Utpala seems to have got confused.

ORIGIN:[3] The religious origin of the Indian drama is generally accepted.[4] This can be testified from the statements of Bharata, author of the Natyasastra. Many of the national and regional folk-dramas of India are closely knitted in the web of religion. The Rama-lila - celebrated in honour of Rama an incarnation of Visnu, dramatises the life and achievements of its hero, Rama, all over Northern India and Mysore - during the festival of Dussehra. Lord Siva's epithet Nataraja associates him with the dance and drama.[5] The Mahabharata mentions the Pasupati Samaja

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1. Bannerji, P., Dance of India, p. 48.
2. According to VD (iii.ch.34), Natya is the imitation of something other than oneself and Nrtta has been described as that which beautifies Natya. Bharata (ch. iv.267-71) states that Nrtta is not imitation like Abhinaya, but has its place as a beautifying art because it lends charm.
3. For details see Keith, A.B., Sanskrit Drama, Oxford, 1924, pp. 16, (36-49, 1954 ed.) He synchronises Indian drama with the theatrical movement of Greece and Mexico.
4. xxxvi. 81-82.
5. Mbh 1.143.3.

festival which was held in honour of Siva, and included drinking dance and song. According to his devotees dance and drama propitiate Siva more than any other form of worship.[1] Patanjali refers to two dramatic performances viz., Bali-vandha and Kamsa-vadha which were enacted on the religious occasions.[2] The temples of Mahakala (Siva) of Ujjaini always resounded with the music and dance. The regional folk drama of Bengal known as Yatra is conduced to felicitate Krsna, another incarnation of Visnu. Similarly the dramas and dramatic scenes of Kerala, which undoubtedly have their origin in the remote past, are performed in honour of Bhagavati, the great Mother goddess.[3]

The secular origin of drama is discharged as redundant.[4] In favour of the religious origin of Indian drama we can supplement that music and dance as we have already seen, played a prominent role in the religious life of India. It will not be going too far to suggest that their third accessory was also originated to satisfy the religious aspirations of the common people of the society.

COMEDY: The comedians played an important part in the plays of ancient India. The tragedies are very rare in Indian dramatic traditions, whereas the Greeks specialised in tragedies only. Buffoons are mentioned by Varahamihira also.[5] Acrobatics was another branch of such type of entertainment which seems to have been quite popular with the masses.[6]

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1. Ghosh, M.M., Contributions to the History of the Hindu Drama; Calcutta -1958, p.3.
2. MP 35.
3. Pisharoti, K.R., Kerala Theatre, The Annamalai University Journal 1, 1932, pp. 96-97.
4. Keith, A.B., op.cit. pp. 29 ff. 1924, and pp. 49-55, 1954, Ghosh, M.M., op.cit., p. 3.
5. BS xvi.19.
6. Ibid. lxxxvi.33.

DIRECTION: Direction, acting and dialogues are the essential features of a stage-craft, which seems to have been well developed during the age under review.[1] Dress is another important requisite of a successful enactment of a play. Varahamihira is very particular regarding the dress. According to him the dress, ornaments and other decorations should be properly paid attention to.[2] Playwright Kalidasa is very successful in designing the various dresses of the different characters.[3]

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1. " The meaning was well brought out by her limbs which were eloquent with expression, the movements of her feet (padanyaso) was in perfect unison with time, there was complete identification with the sentiments conveyed, the acting performed by means of the movements of the hands was gentle, while in its successive stages chases away emotion gave rise to another from its substratum, still the interest remained just the same."
   Mal.ii.8.

2. BS lvii.29.

3. The dress of the abhisarika, according to Kalidasa, (Vik. p. 68) was decked with but a few ornaments and veiled with a blue silk. She was not supposed to wear such ornaments as were likely to produce sound or lustre and she must be in dark vestments to avoid the known people. Kalidasa also refers to 'hunting costume' (Sak p. 68; Raghu ix.50-51), dress of a woman observing a vow (Sak vii.21), of one repenting (Vik. iii.12).

Regarding the make up of the participants, the Samgita Ratnakara (vii.1250-57) is very descriptive.

APPENDIX

SAMASA SAMHITA

1 ताम्रध्वजनलकमुक्ताकमला सुक्लस्निग्धः शुभः सचिता ।
शिशिरादिषु षट्सु ऋतुषु प्रावृषि सर्वेषुस्निग्धः स्निग्धः ।।

2 भवति विशाखाषानां षण्णां याम्येन पार्वदश्चन्द्र ।
उदगिष्टः सर्वेषां पित्र्येशविशाख्योश्चान्तः ।।

समो

3 उदगुन्नतः शुभफलः समः दक्षिणोन्नतो न शुभः ।
युद्धानि चापरूपे ज्यास्य यतस्ते नृपा जयिनः ।।

4 नाविकपीडा नोवल्लांगलवत्संस्थिते कृषिकराणाम् ।
दंडा वांमुक्तसंकटनीर पीठाकृतिर्न शुभः ।।

5 उत्पाता व्याख्याता ये की चन्द्रे पि ते विनिर्देश्याः ।
शुक्ले भवन्ति सोम्याः कृष्णे विकृपापफलदास्ते ।।

6 उदयन्तमध्यसदृशं न शुभं बहुरूपताश्चैकस्य ।
एकश्चन्द्रविकारं यः पश्येन्न स चिरं जीवेत् ।

7 प्रत्यन्तविनाशो न्दायो महाराजपीडा च ।
संग्रामाश्चाभिहते शृंगे भोमादिभिः क्रमशः ।।

8 उल्काभिहतो ग्रहणे तन्नक्षत्रं नृपं हन्ति ।

9 उदगादिषु दिक्षशुभो विप्रादीनांसितादिवर्णस्य ।
विदिगादिगतो हन्याद्राहुम्लेच्छान् सविजिगिषून् ।।

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1. cf BS 111. 24.
2. Ibid. 1v.6.
3. Ibid. 15.
4. Ibid.
5. Ibid.
6. Ibid. 17.
7. Ibid. 21.
8. Ibid. 28.
9. Ibid. v. 34.

10. ध्वजराजन्यान् हन्यादुदगयने दक्षिणे तु विट्शूद्रान् ।
समराम्नाय राहुर्यदि पतान्ते पुनर्दृश्यः ॥

11 कर्मविभागेन वदेत् पीडां देशस्य वीक्ष्य नक्षत्रम् ।
सहितं ग्रहणं येन तद्देशस्त्राप्नुयात् पीडाम् ॥

12 अश्वयुग्माकर्षिकमाद्रपदेष्वागतः सुभिक्षकरः ।
राहुरवशिष्टमासेष्वशुभकरो वृष्टिधान्यानाम् ॥

13 परुषपवनाभ्रार्जितविद्युत्परिवेष मुग्रकम्पाद्याः ।
सप्ताहान्तर्नृणां ग्रहणनिवृत्तौ शुभा दृष्टिः ॥

14 उदयं याति शशिसुतो नोत्पातविवर्जितः कदाचिदपि ।
पवनाग्निसलिलभयदो धान्यार्घविघातकृद्वा ॥

15 प्राकृतविभिन्नसंधिप्रतीक्ष्णयोगान्त घोरपापाख्याः ॥
गत्यो लक्षणभासां नीदयविवसे : स्फुटं भवति ॥

16 स्पष्टा पराशरमते स्वाती च प्राकृता त्रिमं याम्याद्य ।
भिन्ना गतिः शशिशेखरमुक्तापितृदैवता सौम्ये : ॥

17 सन्धिभिन्ना नाम गति पुनर्वसुः फल्गुनीद्वयं पुष्यः ।
तीक्ष्णा भद्रपदार्धं नक्षत्रचतुष्टयं ज्येष्ठा ॥

18 मूलाश्लेषां योगा घोरा श्रवणत्रिमं च सत्वाख्यम् ।
पापाख्या तु विशाखा हस्तो मैत्रं च शशिसूनो : ॥

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10. cf BS v. 34.
11. Ibid. 42.
12. Ibid. 80.
13. Ibid. 92-96.
14. Ibid. vii. 1.
15. Ibid. 12-13.
16. Ibid.
17. Ibid.
18. Ibid.

19 गुरुरुदयति नक्षत्रे यस्मिंस्तत्संज्ञितानि वर्षाणि ।
द्विघ्न्यौगिन्याग्नेयाश्चिमस्त्यं पंचमुपान्त्यम् ।।

20 विष्णुगुरु शक्रहुत मुक्तगटाहिर्बुध्न्यपित्र्यविश्वानि ।
सौम्य मघेन्द्राग्न्यास्त्वं त्वाश्विनमपि भाग्य संज्ञं च ।।

21 चत्वारि युगान्यादौ शुभानि मध्यानि मध्यफलानि ।
चत्वार्यन्त्यानि न शोभनानि वर्णैर्विशेषांश्च ।।

22 वीथी नागा नाम्नी स्वातिर्भरणी च कृत्तिका चैव ।
स्वायम्भुवस्त्वित्मनाः स्युर्जयीयुरैरावती वृषभा ।।

23 एकपदादि चतुष्कं गौ : स्याज्जारद्वयी त्रिभा श्रवणात् ।
मैत्रात्त्रिभेऽग्र्या जा हस्तस्त्रित्रा विशाखा च ।।

24 ह्वे चाषाढे दहना तिस्र उदग्वीथ्यः क्रमाच्छुभदाः ।
मध्या मध्यास्तिस्रो याम्याः पापा मृगाश्वस्ताः ।।

25 मरणीरौद्रमघा निलशक्रधनिष्ठाखिमूलवरुणेषु ।
वारौद्र्यः शुभो मंडलेषु हित्वेन्द्रवह्निपित्र्याथे ।।

26 केचित्केतुसहितं शतभिषसमन्वितं वदन्त्येके ।
नारदमत एकौ यं त्रिस्थानसमुद्भवौ विधिरूपः ।।

27 दिव्यग्रहर्क्षजातास्तीव्रफला मन्दफलकरा सौम्याः ।
प्राणिध्वजादितुल्येषु चान्तरिक्षा न चान्यशुभाः ।।

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19. cf BS viii. 14.
20. Ibid. 23.
21. Ibid. 26.
22. Ibid. ix.4.
23. Ibid.
24. Ibid.
25. Ibid. 22.
26. Ibid. xi. 7.
27. Ibid.

28 उदयास्तमयाद्भूम्न संयोगाकारमार्गदिग्यौतैः ।
फलनिर्देशो दिवसैर्मासैस्तु वर्षाणि ।।

29 अचिरस्थितौ निरुष्टस्तनुः स्मितः स्निग्धमूर्तिरुल्लसितः ।
ह्रस्वस्तनुः प्रसन्नः केतुर्लक्ष्मस्य भावाय ।।

30 न शुभौ विपरीतौ तौ विशेषतः शुक्लवाससंकाशः ।
द्विचिचतुश्चूलौ वा दक्षिणसंस्थश्च मृत्युकरः।।

31 मानौवैत्मर्विधातमुद्र शिखरौ विन्ध्याचलस्तस्मितौ ।
वातापिर्मुनिकुपितमुख सुररिपुजीर्णश्च येनासुरः ।।

32 पीतश्चाम्बुनिधिस्तपोम्बुनिधिना याम्या च दिग्भूषिता ।
तस्यागस्त्यमुनः पयश्च्युतिकृतश्चारः समासादयत् ।।

33 सप्ताभिरंशैः कन्यामप्राप्ते रौमके तु दिवसकरे ।
दृश्यो गस्त्यो वन्त्यां तत्समुपूर्वापरे प्येवम् ।।

34 मत्र्यमाग्नेयार्धं मध्यं प्राक्प्रवृत्ति च प्रदक्षिणतः ।
कथ्यापि प्रविभागं रौद्रात्प्रागादिदेशानाम् ।।

35 मध्यमुदक्पांचाला वंगा यमुनान्तर कुरुदौश्च
उदगपि च पारियात्रात्परमथवा योग्यमत्स्याश्च ।।

36 सारस्वतयामुनवत्सघौघसंस्थाननीपमांडव्याः ।
मद्रारिमोदनेभिणसात्वोपज्यौतिषाश्चत्याः ।।

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28. of BS xi.7.
29. Ibid. 9.
30. Ibid.
31. Ibid. xii. 13.
32. Ibid.
33. Ibid. 14.
34. Ibid. xiv.29-31.
35. Ibid.
36. Ibid.

37 औदुम्बरी च कुरोज्जिहानाजक्षाह्वकंकपांडुडाः ।
माध्यमिकौदेहिकालकौटिकापिण्ठलाश्चेति ।।

38 मध्ये यं प्रविभागः शेषाणां तथादिशेदेशान् ।
प्रख्यातदेशमध्यान्न्यां श्लेषाभिधास्यामि ।।

39 आर्द्रादिका शिकोशला मथिलौ त्कलवर्धमानपांड्योड्राः
लौहित्यमाधवमतटमेकलाध्रुताप्रलिप्ताख्याः ।।

40 आश्लेषाद्यै त्रिपुरी निषादराष्ट्राणि वैदिकशाणाः ।
शूलिकविन्ध्यान्तःस्था वत्सान्ध्रविदर्भकालिंगाः ।।

41 आर्यम्णाद्यैवैदिशकोकंणवनवासिकोल्लगिरिमल्याः ।
उज्जयिनीमरुकच्छा दिशा च याम्याणवौ यावत् ।।

42 स्वात्याद्यै सिन्धुसौवीरकापिलमनितास्यमागरौनसाः ।
बर्बरयवनसुराष्ट्रकाम्बोजकविडवत्काः ।।

43 ज्येष्ठादितौ परान्तकशाल्वेयजांगलपांचनदकत्काः ।
निर्मर्यादा म्लेच्छाः शांतिवीक्काणवेद्याश्च ।।

44 विश्वेश्वरादिशूलिकत्वालवु णारिकनेत्रमांडव्याः ।
स्त्री राज्य चर्मरंगा श्मकालडहारुहकपाटलुलकाः ।।

45 शतभिषगाद्यै कैकयगांधारादर्शयामुनाग्नीध्राः ।
दासै यचिपिटनासाजैनायना दंडमिंलकाः ।।

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37. Cf BS xiv. 29-31.
38. Ibid.
39. Ibid.
40. Ibid.
41. Ibid.
42. Ibid.
43. Ibid.
44. Ibid.
45. Ibid.

46 पाषणाधे काश्मीरत्रिगर्तदर्वाभिसारचोलसा: ।
कुणविरातकीरा ब्रह्मपुरजट्टासुरा श्चेति ।।

47 भानोरंगकलिंगवंगयमुना: शीर्षला: पारता ।
बाह्लीकोत्कटसुलशोणमधा: प्रांभेदाशंका: ।।

48 कोशा ब्बी शबरान्ध्रभोजवना याच्याभिता मेकला ।
श्चीनोड्डीचरवर्बरान विकटा स्वम्बष्ठपत्याभिता: ।।

49 जाल्पंतर्दुर्ग कोशलमनिता राज्यतुषारतंगणा: ।
मलवाद्रहला: सरस्वती शीतांशौमेरुकच्छरोमका: ।।

50 क्षिप्तिजस्य महानदो पयोष्णी वेणावेत्रवती च मालती ।
मलयद्रविडाश्मकान्ध्रकोला भीमार्द्धे त्वपरे च ये स्थिताश्च ।।

51 पारेविन्ध्यं परिवम: शोणभागो गोदावर्या: कुलमद्रिमेन्द्र: ।
सिप्रा सिन्धुर्मिलन्त्येति देशा वेदेहाख्या: कौंकणा: केरलाश्च ।।

52 सौम्यस्य सौराष्ट्रिकलोजदेशा गंगान्विताश्चार्बुदकुलनथ: ।
विन्ध्यर्द्धमन्त्यं मथुरा पुरस्तात्सुवास्तुसिन्ध्वद्रिगुहान्विताश्च ।।

53 जीवस्य सारस्वतमत्स्यशाल्वा: प्राक्सिन्धुभागो मथुरापरार्द्धम् ।
सुध्न: शतद्रु रमठा विपाशा त्रैगर्त योधेयकमारताश्च ।।

54 देशा मृगौन्तकाशिला वितस्ता गान्धारका: कैकयमालवाश्च ।
दाशार्णकोशीनरचन्द्र भागास्त्वेणाश्च सिप्रास्थलकालकाख्या: ।।

46. cf Bg xiv. 29-31.
47. Ibid. xvi. 37-38.
48. Ibid.
49. Ibid.
50. Ibid.
51. Ibid.
52. Ibid.
53. Ibid.
54. Ibid.

55 सरस्वती च यत्र गता प्रणांश वेदस्मृति मालवकाः सुराष्ट्राः ।
पाश्चात्य देशा विदिशा बही च सौरैः स्मृताः पुष्करमर्बुदश्च ।।

56 रौहोः कृतघ्नकुलपांसननी चशूद्रा वौक्काणशुल्किानियुद्धविदुग्रकोपाः ।
गौमायुमद्रागिरिदुर्गनिवासिनश्च गर्भस्थहिंस्रपर दाररताः खलाश्च ।।

57 शिखिनौ वनसंस्थितावगाणा मरुभूपहल्लवचौलहूणचीनाः ।
व्यवसायपराक्रमोपपन्नाः परदारानुरता मदोत्कटाश्च ।।

58 तीक्ष्णौ कैः स्वल्पसस्यश्च गतमेघौ तितस्करः ।
बहुर गव्याधिगणौ भास्कराबुदौ रणाकुलः ।।

59 बहुवर्षातिसस्यश्च गवांक्षीरप्रदायकः ।
चन्द्राबदः कामिनामिष्टश्चित्यंवितमहीतलः ।।

60 अग्नितस्कररोगाढ्यौ नृपविग्रहदायकः ।
गतस्यौ बहुव्यालौ भौमाबुदौ बालहा मृश्च ।।

61 ब्रह्मदात्रस्य सस्यानां जनानां च कलाविदाम् ।
वृद्धिप्रदौ बुदौ बौधस्तु भूपसाच्यकरः शिक्षातौ ।।

62 बहु यज्ञौ तिसस्यश्च गौगजास्वस्थितस्तथा ।
पुरन्दरगुरोरबुदौ बहुसस्यप्रदः शिवः ।।

63 सस्याढ्यौ धर्मबहुलौ गतांतकौ बहूदकः ।
कामिनां कामदः कामं सिताबुदौ नृपशर्मदः ।।

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55. cf BS xvi. 37-38.
56. Ibid.
57. Ibid.
58. Ibid. xix. 1-3.
59. Ibid. 4-6.
60. Ibid. 7-9.
61. Ibid. 10-12.
62. Ibid. 13-15.
63. Ibid. 16-18.

64 दुर्भिक्षामरकं रोगान् करोति पवनं तथा ।
शनैश्चरो बुधो दोषांश्च विग्रहांश्चैव भूभुजाम् ।।

65 संवत्सरोक्तं सकलमतुमासायनेषु च ।
फलं ग्रहस्य वक्तव्यं बल्युक्तस्य नान्यता ।।

66 सर्व वदा दिनकरं विशन्ति कुग्रहास्तदा पीडाम् ।
दुश्चक्रभयादेकेरपरेश्च परस्पराघातैः ।।

67 प्रत्यक्षिणः प्रसन्नाः समृतकिरणाः प्रदीप्तरणावर्ताः ।
सुस्निग्धामलतनवः दौर्भिक्षावहास्ते स्युः ।।

68 ग्रहकौशलन्निपातौ संवर्तसमागमौ समाजस्य ।
सम्मोहश्चेति तेषां लक्षणमस्तात्समादेश्यम् ।।

69 सूर्यज्ञगुरुसंयोगे ध्रुवावप्येकौ परः समागच्छेत् ।
स हि भवति कौशलंज्ञो दुर्भिक्षभयावहो लोके ।।

70 एक उदितः प्रतीच्यामपराः प्राच्यां ग्रहोदितौ यदि च ।
अन्योन्यमर्थोग्रामिर्विलिखेतु स हि सन्निपातास्यः ।।

71 सह पौरैण च पौरो यायी सह यायिना ग्रहो यश्च ।
दृश्येत समायुक्तः स समाजख्यः समुद्दिष्टः ।।

72 अथ यायिनागराख्या श्चत्वारः पंच वा सह भवेयुः ।
एकत्रौ संवर्तः शिखिराहुयुतः स सम्मोहः ।।

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64. cf BS xlx.19-21.
65. Ibid.
66. Ibid. xx.4.
67. Ibid.
68. Ibid. 6-8.
69. Ibid.
70. Ibid.
71. Ibid.
72. Ibid.

73 प्रत्यक्चिर्णः प्रसन्नाः स्युर्भूतकिरणाः प्रदक्षिणावर्ताः ।
सुस्निग्धा मलतनवः सौम्यसिताभावहास्ते स्युः ।।

74 संवर्तसमागम्यो: साम्यं मौढ्ये भयानि कोशे च ।
सुसमा समाजसंशे वैराण्यथ सन्निपातास्ये ।।

75 दुर्भिक्षरोगतस्करशस्त्रावृष्टिर्भयं ग्रहाः क्रूराः ।
ज्वानलवीथ्यां शस्या अजवीथ्यां नैर्त्यपरिहानिः ।।

76 शस्त्रभयं मृगवीथ्यां जारद्गव्यां क्षुधं च रोगांश्च ।
पशुनाशोवीथ्यामृक्षभाख्यायां च नृपपीड़ा ।।

77 सुसुमिराभिरावत्यां गजवीथ्यां च कृतुत्सवामोदा ।
अतिजलमौर्वां कूर्मनागाख्यायां च सर्वे तु ।।

78 ग्रहोदय प्रवासे च सौम्यसूर्यग्रहे तथा ।
विचार्य वीथिमार्गांश्च लोके वूयाच्छुभाशुभम् ।।

79 षोडशासितपक्षादेः श्रावण शुक्लादयो विनिर्देश्याः ।
सार्द्धे अहिर्बुध्न्यभिषक्पाकः स नक्षत्रे ।।

तस्मादेवं स्थितं भावनमानवशाद्गर्भसम्भवः ।

80 शस्तानि मृगान्मासाच्छीतहिमवायु मेघकुलानि ।
स्तनितततडिज्जलमारुतघनतापान्यतिशस्यं तु वैशाखे ।।

81 कृष्णेन शुक्लपक्षः सितेन कृष्णो निशा दिनोत्थेन ।
रात्र्याहः सन्ध्यायां सन्ध्यादिव्यत्ययाज्जलदाः ।।

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73. Cf. BS xx.6-8.
74. Ibid. 9.
75. Ibid.
76. Ibid.
77. Ibid.
78. Ibid.
79. Ibid. xxi.7.
80. Ibid. 19-22.
81. Ibid.

82 पृथुघनबहुला जलदा जलरसतुलान्विताः शुभा गर्भाः ।
स्निग्धसितबहुलपरिवेषपरिवृतौ दिनकरोष्णकरौ ॥

83 नृत्यमृगा मुदिता निरुपहतास्तरवः ।
वियदमलं च यदा भवति तदा सुषमा ॥

84 स्निग्धतडित्प्रतिसूर्यकमत्स्य शक्रधनुः प्रथमापरभक्ते ।
शान्तरवा मृगपक्षिमनुष्याः शुक्रशशीश्वरदिवसनाश्च ॥

85 दिव्यं ग्रहनक्षत्रं भूमि गतं स्थिरचरौदकं यच्च ।
दिग्दाहोल्कापातपरिवेषार्कं वियत्प्रभमु ॥

86 पंचनिशेः शतयोजनं तद्वर्षदिनैकहान्या तः ।
वर्षाणि पंचनिमितादुपैत्यनेकेन यो गर्भः ॥

87 ज्येष्ठस्य पौर्णमासीमतीत्यमुद्रया यथा वृष्टे ।
आप्यायेर्जलमानं मागधमानेन हस्तमिते ॥

88 आषाढबहुलमध्ये शिशिरकरे रोहिणीसमायुक्ते ।
यदि गगनममलमत्यन्ततीक्ष्णरश्मिः सङ्खांशुः ॥

89 सलिलगुरुनम्रजलधरतडित्लतालालरंजितदिग्न्तः ।
वर्षितमलमेकवातक्लोदम्बधिनिमाकाश्च ॥

90 दिक्तिमिरविजरहितः स्फटिकनिभश्चन्द्रमा निरुत्पातः ।
मरुतश्च पूर्वपूर्वसरोचराः शान्तमुपविलाः ॥

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82. Cf. B.S. xxi.23-24.
83. Ibid.
84. Ibid.
85. Ibid. 29.
86. Ibid. 30.
87. Ibid, xxii.2.
88. Ibid. xxiv. 20.
89. Ibid.
90. Ibid.

91 उदगपि च तुल्निकिरणः पूर्वांतरतो यदा स्थितः प्राच्याम् ।
यदि भवति तदा वसुधा भवति विबुधा प्रकृष्टजला ।।

92 उपसन्ध्यं नलदिकस्थे याम्याशास्थिते शकटके च ।
किं कष्टेस्तोरकलेः श्रुतमार्ग्यैः कृशो भवति ।।

93 स्निग्धशुक्लमादित्यं नेर्ऋत्यां नातिपुष्टिरपरेण ।
व्याय्व्याशांसंस्थे मध्यं सस्यं कुमुदनाथे ।।

94 तुलिताधिवासितानामन्येषूर्ध्वदधिकं भवति बीजम् ।
आषाढपौर्णमास्यांतद्दृष्टिस्तत्र मन्त्री यम् ।।

95 वर्षाप्रश्ने प्रावृषि जलराशौ कण्टके शशी बलवान् ।
मृदुजौ वा शुभदृष्टौ बहुजलकृत् स्वल्पदः पापे ।।

96 आर्द्रद्रव्यं सलिलं जलसंश्रवणदर्शनान्यथावा ।

97 पूर्वाह्णकाले शान्ता वारुणदिवस्था विशृंगी वा ।
दर्पणलोहकलंकी लवणक्लेदी तितीक्ष्णकिरणो कैः ।।

98 पौष्णयन्ते मत्स्या दिश्येशान्यां तडिच्च दिवा ।
उत्कर्णपुच्छवदना गावस्तामो भ्रमां पवनाशः ।।

99 अंजनपुंजस्थाना गिरयो वाष्पावृता यदि वा ।
यदि जलपांशुस्नानं विहगानां मैथुनं स्निग्धजिह्वानाम् ।।

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91. Cf BS xxiv. 33.
92. Ibid.
93. Ibid.
94. Ibid. xxvi. 1.
95. Ibid. xxviii.1.
96. Ibid. 2.
97. Ibid.
98. Ibid.
99. Ibid. 18.

100 वृक्षारोहणमथवा पिपीलिकांडोपसंक्रांतिः ।
कृष्णाकुक्कुटकपोतक लविंकविलोचनो वेन्दुवो: ।।

101 स्निग्धा: परिवेषा वा वियदमलं बालकनिभम् ।
मधुसदृशः शीतांशुः प्रतिचन्द्रः शीतमारुतः पूर्वः ।।

102 ऊर्ध्वांकुराश्च वत्यस्सपीवर्णाय कीर्त्यन्ते ।
स्निग्धा: समधितरेखा यथाम्बुजान्दानि कल्पितताम्येव ।।

यच्छन्त्यपो मयूखा यदि वेन्दोर्वा रवेदीप्ता: ।।

103 आर्यंणापूर्वं मचतुष्टयं च शशांकमादित्यमथाश्विनी च ।
वायव्यमेतत्पवनौ च वंडो मासद्वयेनाशुभः प्रजानाम् ।।

104 अजैकपादं बहुला मरण्यौ माग्यं विशाखा गुरुभं मघा च ।
दहनाग्निशस्त्राग्नयकोपकारि पदोस्त्रिमिण्डलमग्निसंज्ञम् ।।

105 प्राजापत्यं वैष्णवं मैत्रमैन्द्रं विश्वेशं स्याद्वासवं वाभिजिच्च ।
रैन्द्रं ह्येतन्मंडलं सप्तरात्रात् कुर्यात्तोयं दृष्टलोकं प्रशान्तम् ।।

106 अहिर्बुध्न्यं वारुणं मूलमाप्यं पौष्णं सार्पे मन्थचारीश्वरं च ।
यर्थं पाकं वारुण नाम शस्तं तोयप्राप्यं दृष्टलोकं प्रशान्तम् ।।

107 उल्काहरिश्चन्द्रपुरं रजश्च निर्घातसूर्यकम्पकुप्रदाहा: ।
वातो तिवण्डो ग्रहणं रवीन्दुवोर्नीहावज्रतारागणवैकृतानि ।।

व्याघ्रे वृष्टिवैकृतं वातवृष्टिर्धूमो नाग्निविस्फुलिंगाग्निचिन्हो वा ।
108 वन्यं सत्त्वं ग्राममध्ये विशेद्वा रात्रावेन्द्रं कार्मुकं दृश्यते वा ।।

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100. cf BS xxvlii. 18.
101. Ibid.
102. Ibid.
103. Ibid. xxxi. 23.
104. Ibid.
105. Ibid.
106. Ibid.
107. Ibid.
108. Ibid.

109 सन्ध्याविकारः परिवेषखंडा नयः प्रतीपा दिधि सूर्यनादः ।
अन्यच्च यत्स्यात्प्रकृतेः प्रतीपं तन्मंडलेष्वेव फलं निगद्यम् ॥

110 अस्त्राणि लोकपाला लोकाभावाय सन्त्यजन्त्युल्काः ।
केषांचित्पुण्यकृतां तत्रोल्का विच्युतिः स्वर्गादिति ॥

111 उल्काश्च पंचरूपा दिव्यान्तरिक्षभौमाश्च विद्युतो शनिस्तारा ।
दिव्यान्तरिक्षे पतनात्फलं तद्विगुणं स्वाशनिः भौमके न्यूने ॥

फलपादकरी तारा दिव्यान्तरिक्षे पुच्छलं शेषाः ।

112 अशनिः प्राणिषु निपतति दारयति धरातलं बृहच्छब्दा ।

113 विपुलतटशब्दा ज्वालामालाकुला पतित ॥

114 दिव्यान्तरिक्षभौमा सिता द्विवर्णस्ता धूम्रिदश याति कृष्णेहा ।

115 तारा तु हस्तमात्रा यात्यूर्ध्वमधः स्थिता सिता ताम्रा ॥

116 उल्काग्रतो विशाला बहुप्रकारा पुरुषमात्रा ।

117 उदगादिषु विप्रादीन् सितलोहितकृष्णवर्णाश्च
घ्नन्ति ग्रहनाघातैस्तद्भक्तीनां च नाशाय ॥

118 कृष्णहरितलवणादितिकिरणप्रभंजनेदीप्तेः ।
दीप्तांडजभुजगविरुतैर्निर्घातदिगदितिविभेदैश्च ॥

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109. cf BS xxxii. 23.
110. Ibid. xxxii.1.
111. Ibid. 2.
112. Ibid. 4.
113. Ibid. 5.
114. Ibid. 6.
115. Ibid. 7.
116. Ibid. 8.
117. Ibid. 17.
118. Ibid. 30.

119 दुर्भादकवापधिकारवन्निमः पुरन्ध्रमूर्धिरतिबहुलः ।
सकल गगनानुचारी बहुवर्णश्चावलम्बी च ॥

120 स्निग्धश्चिक्कणः स्तब्धो वा सन्ध्याभ्रमुत्थितो ग्रहच्छायी ।
परिवेषः पापफलो ग्रहरोधी वा तद्भवति: ॥

121 स्निग्धो मधुवर्णशिखाभ्रपङ्क्तीलोत्पताभ्रसन्निभः ।
सौम्यनृपविनाशाय मयूरपरिवेषो वैश्य शशिनो वा ॥

122 बलपुरोहितनरपतिकुम्भिकृत्पीडा क्रमेण परिविष्टैः ।
कुञ्जरतुरगार्कपुत्रैः सौम्येन तु सन्धिपरिवृत्तिः ॥

123 केतोः सन्ध्यौधोगो राहोः परिवेषणेन रोगभयम् ।
युद्धमुदग्यनृपतेर्नाशं व्याध्यादिभिः क्रमशः ॥

124 स्निग्धोत्तो धाराङ्गेण वन्ति नृपपौरमुख्यराष्ट्रजनान् ।
तत्कर्बिप्रांश्चाकोदग्वादिशं पतित यस्याम् ॥

125 यः प्रकृतिविपर्यासः सर्वः संदीपतः स उत्पातः ।
दिवालिगनदिव्यजातौ यथोत्तरं गरुतरौ भवति ॥

126 दिव्यं ग्रहर्क्षजातं भुवि सौम्यं स्थिरचरोद्भवं यच्च ।
दिग्दाहोल्कापतनं परिवेष्यार्थं दिवत्प्रभवम् ॥

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119. cf BS xxxii. 30.
120. Ibid. xxxiv.9.
121. Ibid.
122. Ibid. 12-15.
123. Ibid.
124. Ibid. xxxix.2-5.
125. Ibid. xlvi.1.
126. Ibid. 4-5.

127 पूर्वण्येशान्यां याम्याग्नेय्यां दक्षिणानि यानीयात् ।
द्वाराणि नैर्ऋतात् पश्चिमान्युदक्स्थानि वायव्यात् ।।

128 आग्नेयमग्निमयदं पार्जन्यं स्त्रीप्रसूतिदं द्वारम् ।
प्रचुरधनदं जयन्तं नृपवल्लभकारि माहेन्द्रम् ।।

129 सौये क्रौंचः प्रचुरः सत्ये नृत्तादितं मृगे क्रौर्यम् ।
चौर्ये तथान्तरिक्षे प्राग्द्वाराणि प्रदिष्टानि ।।

130 वायव्ये त्वसुतत्वं प्रेष्यं पौष्णे च नीचता क्षितये ।
बहवन्नपानपुत्रं वृद्धत्वाते याम्य अपि रौद्रम् ।।

131 गान्धर्वं गन्धत्वं नृपवीरमयाय मृगराजाख्यम् ।
मृगमपि सुतवीर्यघ्नं दक्षिणतो द्वारनिर्देशः ।।

132 पित्र्ये शरीर पीडा दौवारिकसंश्रिते च रिपुवृद्धिः ।
सुग्रीवे धनहानिः पुत्रक्षयाह्वयं क्षुपदन्तम् ।।

133 वारुणमयैनिर्दयदं नृपभयदं चासुरं विनिर्दिष्टम् ।
शोषं धनहानिकरं बहुरोगं पापयक्ष्माख्यम् ।।

134 रोगमुखं बधबन्धदमात्मजैराभिवृद्धिदं नागम् ।
मुख्यं धनसुतवृद्धिदमनेककृत्याणदं च भल्लाटम् ।।

135 सौम्यं धन पुत्रकरं भोजो पुत्रैररिवृद्धिः ।
अदितौ स्त्रीदोषाः स्युर्दितौ धनं संक्षयं याति ।।

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127. cf. BS 1111. 73.
128. Ibid.
129. Ibid. 75.
130. Ibid.
131. Ibid.
132. Ibid.
133. Ibid.
134. Ibid.
135. Ibid.

136 स्तम्भतरप्रकोणेर्धिं वेधस्य न शुभकरश्चवारश्च ।
वेधोच्छायाङ्गिगुणां भूमि त्यक्ता न दोषाय ।।

137 नृपाग्निपशुकर्माणि युद्धकार्याणि यानि च ।
सूर्यस्य दिवसे प्राज्ञस्तानि सर्वाणि कारयेत् ।।

138 जलस्त्रीराजकर्माणि मृदून्यन्यानि यानि च ।
तानि चन्द्रदिने कुर्यात् शुक्ल पक्षे विशेषत: ।।

139 दुर्गग्रहणकर्माणि क्रैककर्माणि यानि च ।
तथा च पशुकर्माणि कुर्याद्भौमदिने नर: ।।

140 स्वाध्यायशिल्पव्यायामकलाकर्मरतानि च ।
तानि सौम्यदिने कुर्यादि पापेन संगत: ।।

141 शांतिपौष्टिककर्माणि तथा ज्ञानान्वितानि च ।
तानि कृत्स्नं विधेयानि दिने देवगुरो: शुभे ।।

142 कलागन्धर्वकर्माणि रत्न कर्माणि यानि च ।
तानि कार्याणि दिवसे सदा दैत्यगुरो: शुभे ।।

143 शास्त्राणि पाशकर्माणि, पशुकर्माणि यानि च ।
तानि शौरदिने कार्यालोहकर्माणि यानि च ।।

144 संवत्सरे तथा मासे ह्योरात्रायुष्ये तथा ।
उक्तानि यानि कर्माणि तथा कुर्याद्ध्रुवस्य च ।।

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136. cf PS 1111. 76.
137. Ibid. civ. Dandaka 61-a.
138. Ibid. 61-b.
139. Ibid. 61-c.
140. Ibid. 61-d.
141. Ibid. 62 Dandaka.
142. Ibid. 62-a Dandaka.
143. Ibid. 62-b Dandaka.
144. Ibid. 63-b Dandaka.

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